

# Postgraduate Certificate

## Respiratory Infections and Related Diseases





## Postgraduate Certificate Respiratory Infections and Related Diseases

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

Website: [www.techtitute.com/in/medicine/postgraduate-certificate/respiratory-infections-related-diseases](http://www.techtitute.com/in/medicine/postgraduate-certificate/respiratory-infections-related-diseases)

# Index

01

Introduction

---

*p. 4*

02

Objectives

---

*p. 8*

03

Course Management

---

*p. 12*

04

Structure and Content

---

*p. 16*

05

Methodology

---

*p. 20*

06

Certificate

---

*p. 28*

# 01

# Introduction

Despite notable advances in the treatment of respiratory diseases, pulmonary tuberculosis remains one of the most prominent pathologies, especially in low- and middle-income countries. This poses a challenge for all specialists in the field, to the extent that the WHO committed to eradicating them by the year 2050. This program compiles all the most recent advances surrounding this pathology and other respiratory diseases such as different types of pneumonias, lung abscesses, COVID-19 or pulmonary aspergillosis. Thanks to this, specialists will be able to continue perfecting their approach and diagnosis in their continuous updating effort in this area.



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*Incorporate into your daily practice the most recent findings in the diagnosis of community-acquired pneumonia, non-cystic fibrosis bronchiectasis and pulmonary tuberculosis”*



The COVID-19 pandemic has highlighted how important the most recent knowledge in treating Respiratory Infections and Related Diseases must have for all specialized areas.

It has been precisely during these years when more advances and discoveries have been made in this area, forcing the most prepared specialists to be in a perpetual process of updating and refreshing all the techniques so far applicable.

The advances in the precision of computed tomography have also revived interest in bronchiectasis not due to cystic fibrosis. With the effort made by the teaching staff in the development of this program, specialists will find the best possible didactic material regarding atypical mycobacteria, pulmonary tuberculosis, coronavirus and pulmonary abscesses.

All this in a 100% online format that allows specialists to balance their studies with other professional and personal activities. Thus, this program does not require sacrifices on the part of its students, on the contrary, it adapts to their high pace of work to give them the best option for an academic update.

This **Postgraduate Certificate in Respiratory Infections and Related Diseases** contains the most complete and up-to-date academic program on the market. Its most notable features are:

- ♦ Practical cases presented by experts in Pulmonology
- ♦ The graphic, schematic, and eminently practical contents with which they are created, provide scientific and practical information on the disciplines that are essential for professional practice
- ♦ Practical exercises where self-assessment can be used to improve learning
- ♦ Special emphasis is placed on innovative methodologies in the approach to respiratory failure and lung transplantation
- ♦ 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

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*You will delve into the latest studies and research concerning coronavirus and its impact on the clinical reality in Pulmonology”*

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*You will not have to adapt to a program that imposes fixed schedules or classes. At TECH you decide when, where and how to take on all the didactic content”*

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

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 immersive training programmed to train in real situations.

The design of this Program focuses on Problem-Based Learning, by means of which professionals will have to try to solve the different situations in professional practice, which will be posed throughout the program. For this purpose, the student will be assisted by an innovative interactive video system created by renowned and experienced experts.

*Continue to offer the best professional practice thanks to your constant effort to update your knowledge of Respiratory Infections and their Related Diseases”*

*A program designed to meet your highest professional and academic demands, with a first class medical and academic team”*

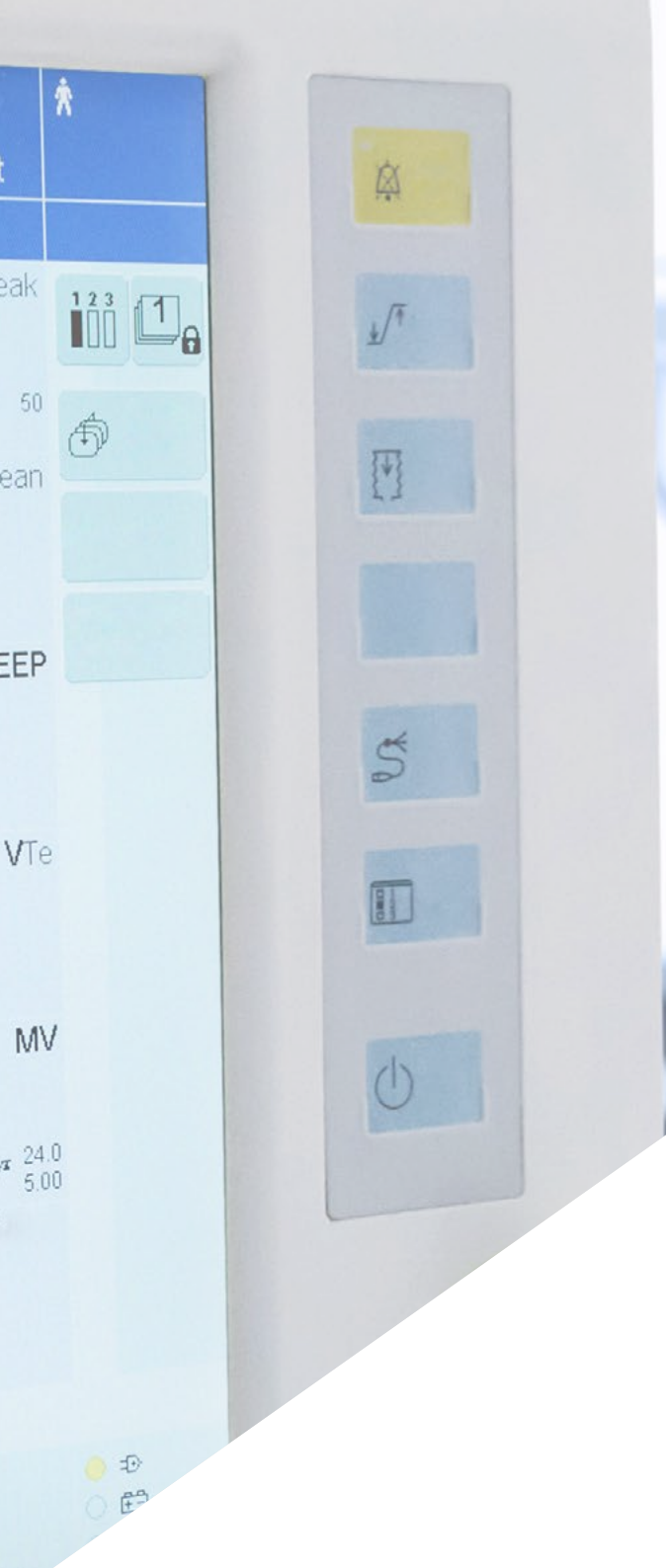


# 02 Objectives

Since Respiratory Infections, and more specifically pulmonary tuberculosis, are of such high interest to the medical community, it is imperative that leading specialists have the best knowledge on the subject. Therefore, the aim of this program is to provide specialists with an exhaustive and in-depth update on all issues related to cystic fibrosis and other types of respiratory infectious pathologies.







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*You will have the support of a professional team committed to helping you achieve your most ambitious goals in the field of medicine”*



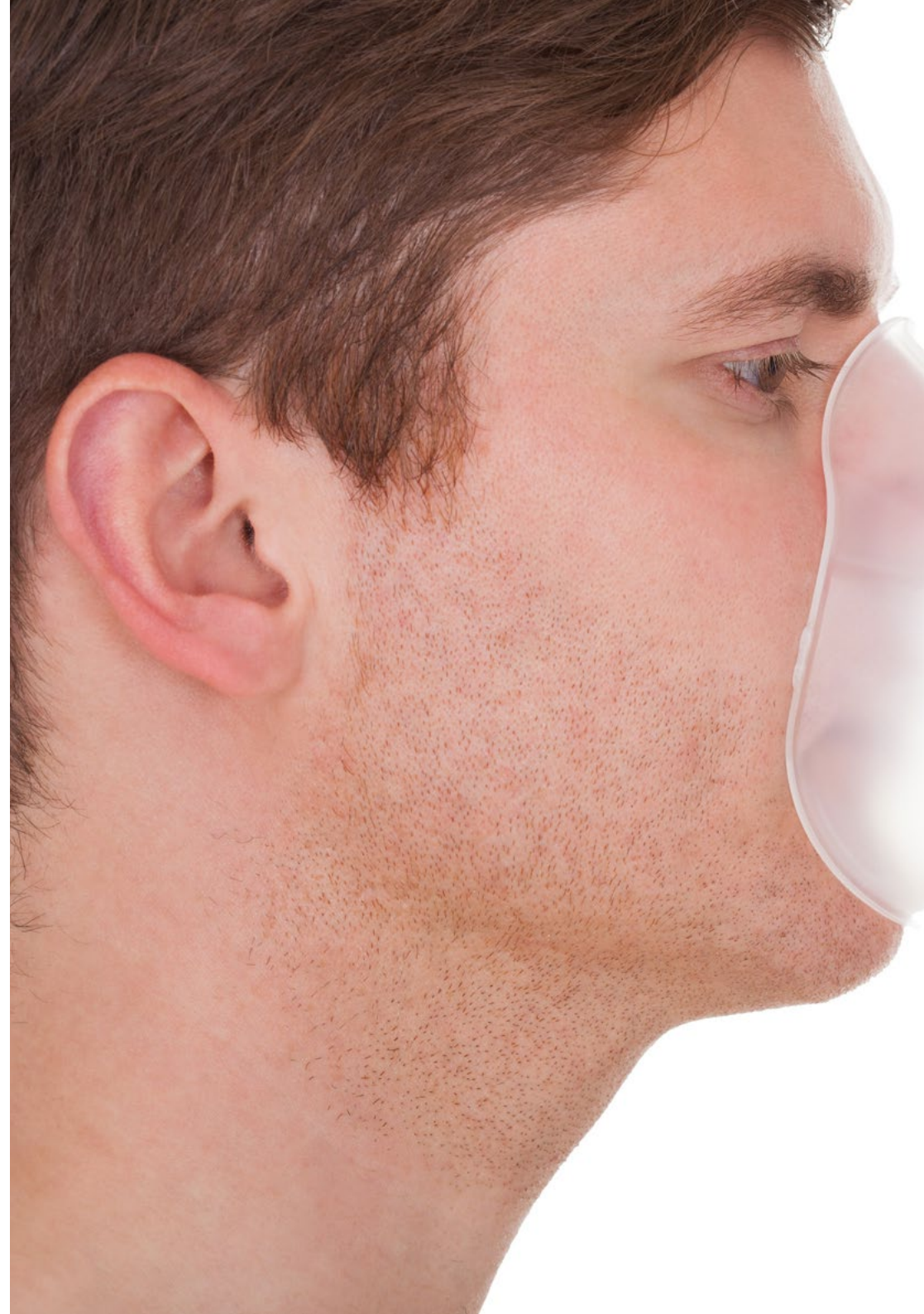
## General Objectives

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

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*You will find yourself incorporating the updated body of knowledge acquired during the course into your daily practice even before you finish the program”*





## Specific Objectives

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- ♦ Provide specific knowledge about the advances in infectious diseases and new antimicrobials, as well as other therapies and new diagnostic tests used for a satisfactory response to the current challenges in respiratory infections
- ♦ Develop the necessary skills in adequately identifying and treating the main infectious pathologies affecting the respiratory system, being able to perform a better clinical management of the different diseases
- ♦ Review recently published guidelines, scientific articles and systematic reviews, through a critical lens and from the best scientific evidence available





03

# Course Management

The teaching staff selected for this program has infused in all the didactic material their extensive experience in treating respiratory infectious pathologies of all types, including the most recent developments regarding COVID-19. Thus, specialists are guaranteed to access a quality program that meets their most urgent updating needs in the main Respiratory Infection diseases.





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*The best teaching faculty will provide you with the most advanced and modern tools and theoretical frameworks in the approach to pulmonary tuberculosis”*



## 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 derived 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

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- 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

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

## Management



### Dr. Jara Chinarro, Beatriz

- Acting Chief of the Pneumology Department, Puerta de Hierro University Hospital, Majadahonda
- Degree in Medicine and Surgery, Complutense University Madrid
- MIR Pulmonary Specialist
- Specialist in sleep disorders, CEAMS



### Dr. Ussetti Gil, Piedad

- Emeritus Advisor in the Pulmonology Department, Puerta de Hierro University Hospital, Majadahonda
- Degree in Medicine and Surgery, Central University of Barcelona
- Specialist in Pulmonology
- Executive Master's Degree in Healthcare Leadership ESADE
- Honorary Professor in the Medicine Department, Autonomous University of Madrid

## Professors

### Dr. Mínguez Clemente, Patricia

- ♦ Attending Physician in the Pulmonology Service, Puerta De Hierro University Hospital
- ♦ Degree in Medicine and Surgery from the Complutense University of Madrid
- ♦ PhD courses and certificate of advanced studies (Research Sufficiency): Everolimus in Lung Transplantation
- ♦ Specialization degree in Bronchiectasis, University of Alcalá de Henares
- ♦ Master's Degree in Advances in Diagnosis and Treatment of Airway Diseases, San Antonio Catholic University

### Dr. Quirós Fernández, Sarai

- ♦ Specialist in the Pulmonology Department, Basurto University Hospital
- ♦ Degree in Medicine and Surgery, University of Alcalá
- ♦ Pulmonology Specialist, Guadalajara General University Hospital
- ♦ Postgraduate Diploma in Bronchiectasis
- ♦ Postgraduate Diploma in Clinical Management of Tuberculosis and Other Mycobacteriosis

### Dr. Calderón Alcalá, Mariara Antonieta

- ♦ Specialist Physician in the Pulmonology Department, Infanta Leonor University Hospital
- ♦ Degree in Medicine, Central University of Venezuela
- ♦ Master's Degree in Chronic Obstructive Pulmonary Disease, Catholic University of Murcia
- ♦ Postgraduate Diploma in Epidemiology and Public Health, Esneca Business School
- ♦ Postgraduate Diploma in Diffuse Interstitial Pulmonary Interstitial Diseases in Systemic Autoimmune Diseases, Complutense University of Madrid

### Dr. Zamarrón de Lucas, Ester

- ♦ Faculty Specialist in Pulmonology Medicine, La Paz University Hospital
- ♦ PhD in Medicine and Surgery, International Honors
- ♦ Master's Degree in Comprehensive Care of Chronic Obstructive Pulmonary Disease, Complutense University of Madrid
- ♦ Postgraduate Diploma in the Approach to Pulmonary Hypertension Prostacyclin Treatment, Francisco de Vitoria University
- ♦ Postgraduate Diploma in Emerging and High-Risk Virus Pathology, Autonomous University of Madrid

# 04

## Structure and Content

Thanks to *Relearning*, a methodology TECH has pioneered, specialists acquire the most important terms and concepts covered in the course in a gradual and natural way. This means the course load is reduced, as the teaching staff has also provided a large amount of audiovisual material, practical guides and real clinical exercises that aid specialists in updating throughout the Postgraduate Certificate.





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*This program will be instrumental in your continuous professional improvement, as it includes the latest content on Respiratory Infections”*

## Module 1. Respiratory Infections and Related Diseases

- 1.1. Community-Acquired Pneumonia (CAP)
  - 1.1.1. Epidemiology
  - 1.1.2. Risk Factors
  - 1.1.3. Comorbidities and Risks in CAP
  - 1.1.4. Etiology
  - 1.1.5. Clinical Manifestations
  - 1.1.6. Diagnosis
  - 1.1.7. Assess the Severity of CAP
  - 1.1.8. Treatment
  - 1.1.9. Clinical Response
  - 1.1.10. Complications
  - 1.1.11. Prevention: Vaccination
- 1.2. Nosocomial Pneumonia (Hospital-Acquired Pneumonia and Ventilator-Associated Pneumonia)
  - 1.2.1. Pathogenesis
  - 1.2.2. Risk Factors
  - 1.2.3. Intrahospital Pneumonia
  - 1.2.4. Ventilator-Associated Pneumonia
  - 1.2.5. Etiology
  - 1.2.6. Diagnosis
  - 1.2.7. Treatment
  - 1.2.8. Preventive Measures
- 1.3. Pulmonary Abscess
  - 1.3.1. Pathogenesis
  - 1.3.2. Differences with Necrotizing Pneumonia
  - 1.3.3. Microbiology
  - 1.3.4. Clinical Manifestations
  - 1.3.5. Diagnosis
  - 1.3.6. Differential Diagnosis
  - 1.3.7. Treatment
- 1.4. Coronavirus: COVID-19
  - 1.4.1. The 2019 Pandemic
  - 1.4.2. Epidemiology
  - 1.4.3. Pathogenesis
  - 1.4.4. Clinical Symptoms
  - 1.4.5. Diagnosis
  - 1.4.6. Treatment
  - 1.4.7. Complications
  - 1.4.8. Prevention
    - 1.4.8.1. Hygienic and Social Distancing Measures
    - 1.4.8.2. Vaccines
- 1.5. Non-Cystic Fibrosis Bronchiectasis
  - 1.5.1. Epidemiology and Costs
  - 1.5.2. Pathophysiology
  - 1.5.3. Etiology
  - 1.5.4. Diagnosis
  - 1.5.5. Differential Diagnosis
  - 1.5.6. Microbiology
  - 1.5.7. Severity and Prognostic Factors
  - 1.5.8. Treatment
  - 1.5.9. Monitoring:
  - 1.5.10. Consensus Treatment of Inflammatory Breast Cancer (IBC), Chronic Obstructive Pulmonary Disease (COPD) and Bronchiectasis

- 1.6. Cystic fibrosis
  - 1.6.1. Aetiopathogenesis
  - 1.6.2. Epidemiology
  - 1.6.3. Clinical Manifestations
  - 1.6.4. Diagnosis
  - 1.6.5. Quality of Life Associated with Health
  - 1.6.6. Treatment
    - 1.6.6.1. Aggravation
    - 1.6.6.2. Chronic Bronchial Infection
    - 1.6.6.3. Bronchial Inflammation
    - 1.6.6.4. Mucociliary Clearance
    - 1.6.6.5. New Drugs (Conventionally Fractionated Radiation Therapy (CFRT))
  - 1.6.7. Rehabilitation
  - 1.6.8. Nutritional Treatment
  - 1.6.9. Treating Complications
- 1.7. Pulmonary Tuberculosis: Epidemiology, Clinical Practice, Diagnosis, Complications and Prognosis
  - 1.7.1. Epidemiology
  - 1.7.2. Etiology
  - 1.7.3. Pathogenesis and Physiopathology
  - 1.7.4. Clinical Manifestations
  - 1.7.5. Diagnosis: Concept of Infection and Tuberculous Disease
    - 1.7.5.1. Tuberculous Infection
    - 1.7.5.2. Tuberculous Disease
      - 1.7.5.2.1. Clinical-Radiological Diagnosis
      - 1.7.5.2.2. Anatomic-Pathological Diagnosis
      - 1.7.5.2.3. Microbiological Diagnosis
  - 1.7.6. Complications and Prognosis
- 1.8. Pulmonary Tuberculosis: Treatment Chemoprophylaxis
  - 1.8.1. Types of Bacillary Populations
  - 1.8.2. Standard Treatment: Proper Drug Combination Selection
  - 1.8.3. Treatment in Special Situations
    - 1.8.3.1. Immunodeficiencies
    - 1.8.3.2. Pregnancy and Breastfeeding
    - 1.8.3.3. Advanced Chronic Liver Failure
    - 1.8.3.4. Chronic Advanced Kidney Disease
  - 1.8.4. Adverse Effects
  - 1.8.5. Interrupting the Treatment
  - 1.8.6. Resistance
  - 1.8.7. Chemoprophylaxis: Latent Tuberculous Infection Treatment
  - 1.8.8. Therapeutic Regimens for Treating Multidrug-Resistant or Extensively Drug-Resistant Pulmonary TB
- 1.9. Atypical Mycobacteria
  - 1.9.1. Taxonomy and Epidemiology
  - 1.9.2. Pathogenesis and Host Susceptibility
  - 1.9.3. Clinical Forms
  - 1.9.4. Diagnostic Criteria for Atypical Mycobacterial Disease
  - 1.9.5. Treatment
- 1.10. Pulmonary Aspergillosis and Other Mycoses
  - 1.10.1. Pulmonary Aspergillosis
  - 1.10.2. Candidiasis Bronchopulmonar
  - 1.10.3. Cryptococcosis
  - 1.10.4. Mucormycosis
  - 1.10.5. Pneumocystis



*You will have the best possible curriculum in the area at your fingertips, as it can be accessed 24 hours a day”*

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.





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*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.

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

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

1. Students who follow this method not only 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

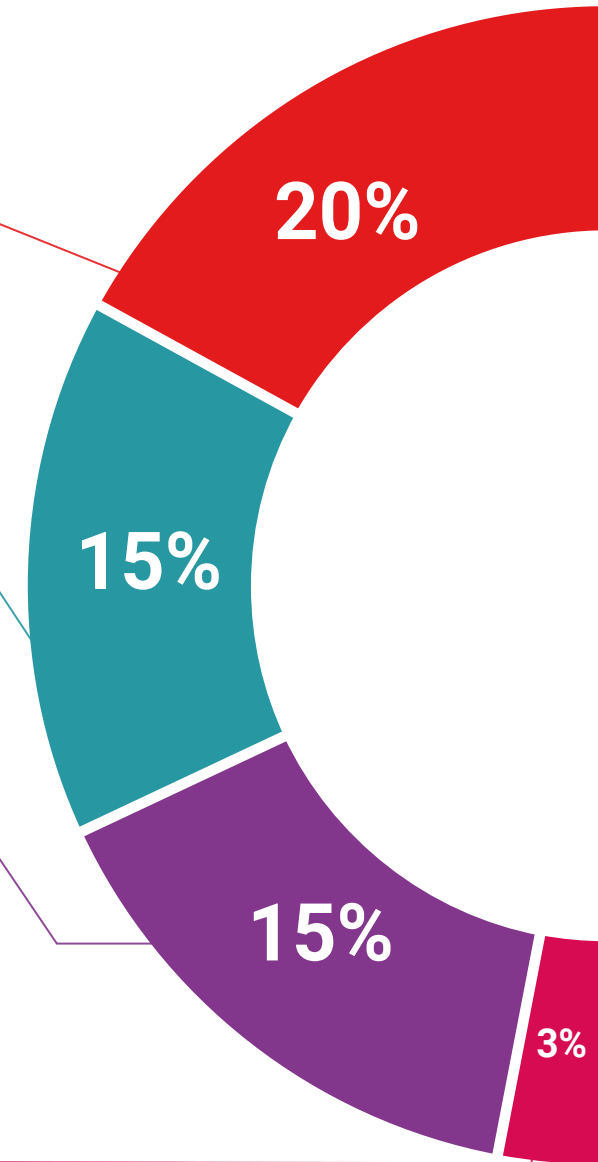
The TECH team presents the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

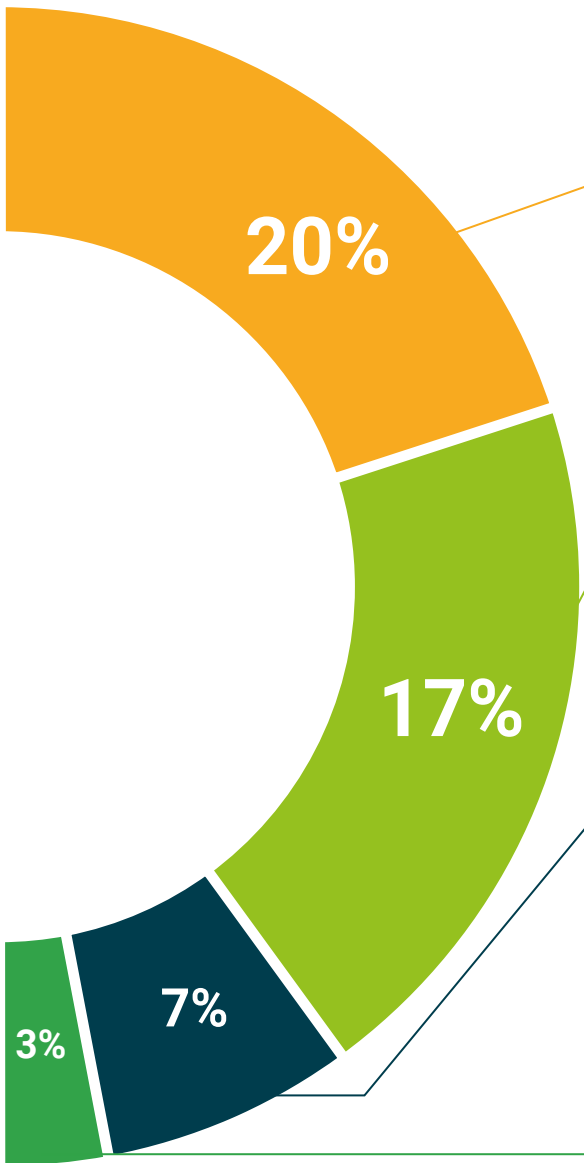
This exclusive educational system for presenting multimedia content was awarded by Microsoft as a "European Success Story".



#### 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 Infection and Related Diseases guarantees students, in addition to the most rigorous and up-to-date education, access to a Postgraduate Certificate issued by TECH Technological University.



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

This **Postgraduate Certificate in Respiratory Infections and Related Diseases** 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 Certificate** issued by **TECH Technological University** via tracked delivery\*.

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

Title: **Postgraduate Certificate in Respiratory Infections and Related Diseases**

Official N° of Hours: **150 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.

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

**Postgraduate Certificate**  
Respiratory Infections and  
Related Diseases

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



# Postgraduate Certificate

## Respiratory Infections and Related Diseases

