

# Postgraduate Certificate

## Lower Airway and Intra-Abdominal Infections in the Emergency Room





## Postgraduate Certificate Lower Airway and Intra-Abdominal Infections in the Emergency Room

Course Modality: **Online**

Duration: **2 months.**

Certificate: **TECH Technological University**

Official N° of Hours: **150 h.**

Website: [www.techtute.com/us/medicine/postgraduate-certificate/lower-airway-intraabdominal-infections-emergency-room](http://www.techtute.com/us/medicine/postgraduate-certificate/lower-airway-intraabdominal-infections-emergency-room)

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# 01

# Introduction

Working in the Emergency Department can be complex, as physicians are faced with many different cases, most of them with complex symptoms that need to be resolved quickly. To enhance your training in the field of Infectious Diseases, TECH presents this specific program on Lower Airway and Intra-abdominal Infections, a unique opportunity to learn from the best professionals in the field.







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*Lower airway and intra-abdominal airway infections can be complex, requiring healthcare workers to have a high level of training to ensure correct treatment”*

The objective of this Postgraduate Certificate in Lower Airway and Intra-abdominal Infections in the Emergency Room is to train physicians who work in this area to obtain superior knowledge that will allow them to make early diagnoses and apply effective therapies to patients with these pathologies. For this, we have the best team of professionals of the moment, experts in each of the particularities of the main infectious diseases and with proven experience in both the health and teaching fields.

As in most specialties, in the case of infectious pathology, the work of the clinician in the Emergency Department is sometimes complex and their actions are often a crucial factor in the morbidity and mortality of patients. Therefore, updating physicians' knowledge with quality higher specialization programs should be a mandatory matter in all hospital centers.

Based on this premise, we believe that it is essential to establish training tools for health professionals who have to deal with infectious diseases outside specialized units and services. In this program we will deal with the performance of healthcare workers dealing with infectious diseases in the emergency department from the point of view of early diagnosis and treatment, which is often empirical. We will also include up-to-date information on imported pathology, especially in those cases that require urgent action and/or present a potential capacity of transmission in our environment. And above all, we will focus on infections of the lower airway and intra-abdominal infections.

In addition, as it is a 100% online training, the professional will have the ability to decide when and where to study, without constraints or obligations, thus being able to combine their study time with the rest of their daily commitments.

This **Postgraduate Certificate in Lower Airway and Intra-Abdominal Infections in the Emergency Room** contains the most complete and up-to-date scientific program on the market. The most important features of the program include:

- Clinical cases presented by experts in new Lower Airway and Intra-Abdominal Infections in the Emergency Room
- 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
- Therapeutic innovations in the intervention of Lower Airway and Intra-Abdominal Infections in the Emergency Room
- Practical exercises where self-assessment can be used to improve learning
- An algorithm-based interactive learning system for decision-making in the clinical situations presented throughout the course
- Special emphasis on research methodologies
- 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



*Specialized higher training is fundamental in the field of medicine in order to improve the training of healthcare workers and, of course, the health of the patients"*

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*This Postgraduate Certificate is the best investment you can make when choosing a refresher program for two reasons: in addition to updating your knowledge in Lower Airway and Intra-Abdominal Infections in the Emergency Room, you will obtain a qualification from TECH Technological University”*

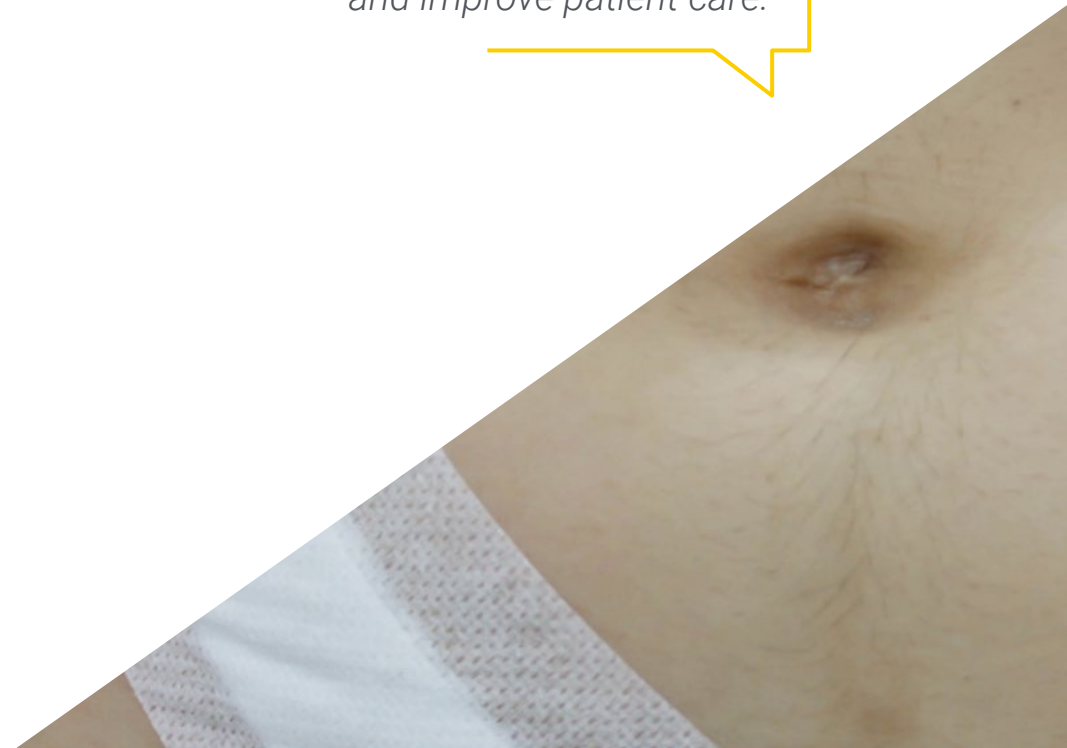
The teaching staff includes professionals from the field of medicine, who bring their experience to this training program, as well as renowned specialists from leading scientific societies.

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 training experience designed to train 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 during the academic course. For this purpose, the professional will be assisted by an innovative interactive video system created by renowned and experienced experts in the field of Lower Airway and Intra-Abdominal Infections in the Emergency Room with extensive teaching experience.

*Increase your confidence in decision making by updating your knowledge through this program.*

*Make the most of the opportunity to learn about the latest advances in Lower Airway and Intra-Abdominal Infections in the Emergency Room and improve patient care.*



# 02 Objectives

The Postgraduate Certificate in Lower Airway and Intra-Abdominal Infections in the Emergency Room is designed to facilitate the performance of the physician dedicated to the treatment of infectious diseases in all areas, but above all, in the Emergency Department.







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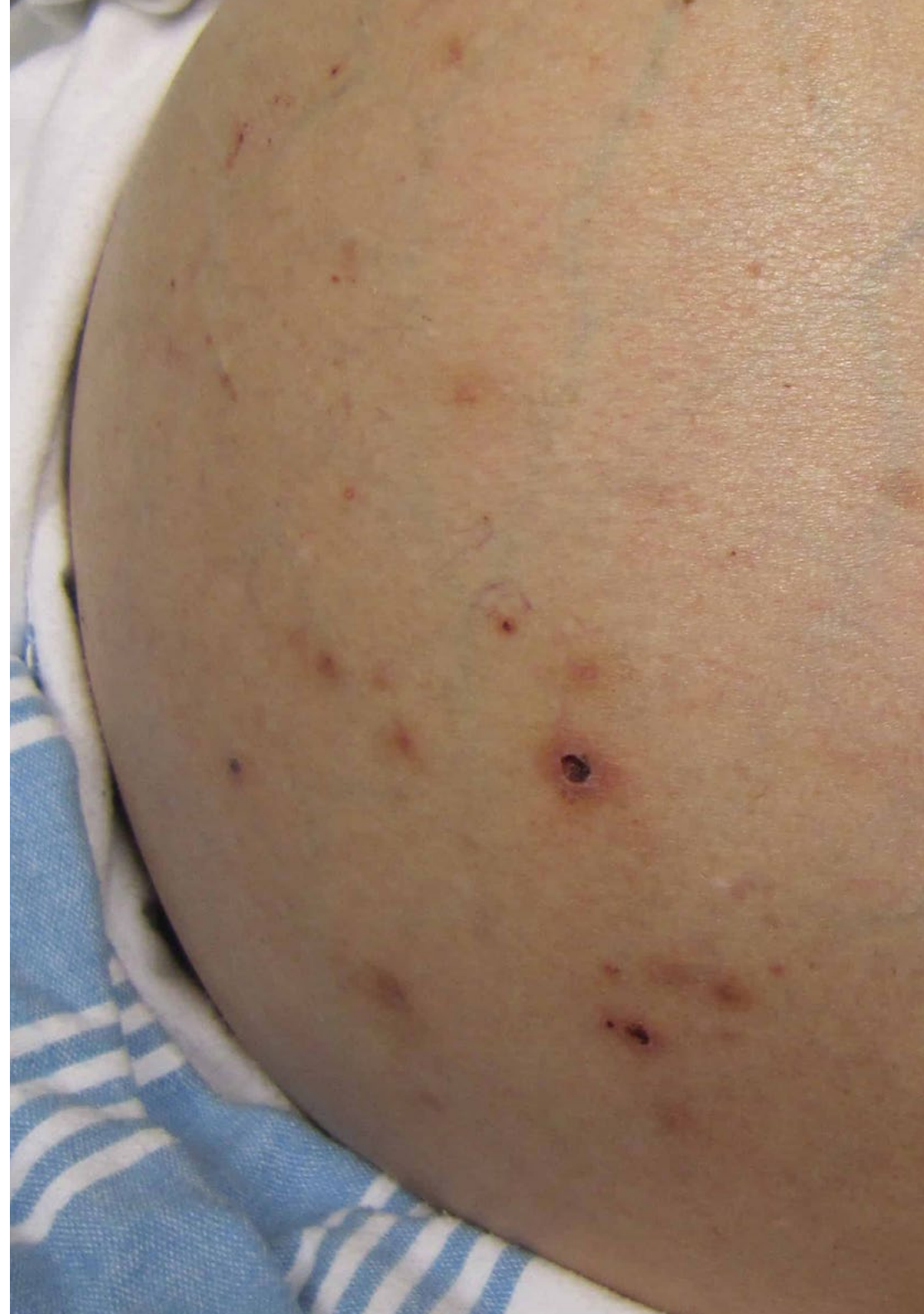
*The goal is to achieve academic excellence and to help you achieve it. Don't think twice and join our community of students"*



## General Objectives

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- Provide the theoretical knowledge necessary to understand the environment in which professional care is given to patients with infectious diseases.
- Provide the appropriate treatment in the different cases of infectious diseases.
- Gain in-depth understanding of the areas in which professionals must be trained, in order for them to be able to provide the best practice when treating infectious diseases.







## Specific Objectives

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- ♦ Explain the diagnosis and treatment of acute bronchitis in the Emergency Department.
- ♦ Explain the diagnosis and treatment of Acute Chronic Obstructive Pulmonary Disease (COPD) in the Emergency Department.
- ♦ Explain the diagnosis and treatment of community-acquired pneumonia (CAP) in the Emergency Department.
- ♦ Explain the diagnosis and treatment of healthcare-associated pneumonia (HAP) in the Emergency Department.)
- ♦ Explain the diagnosis and treatment of empyema in the Emergency Department
- ♦ Explain the diagnosis and treatment of a pulmonary abscess in the Emergency Department.
- ♦ Explain the diagnosis and treatment of pulmonary tuberculosis in the Emergency Department.
- ♦ Explain the diagnosis and treatment of gastroenteritis in the Emergency Department.
- ♦ Explain the diagnosis and treatment of liver and biliary tract infections in the Emergency Department.
- ♦ Explain the diagnosis and treatment of cholecystitis and cholangitis in the Emergency Department.
- ♦ Explain the diagnosis and treatment of a liver abscess in the Emergency Department.
- ♦ Explain the diagnosis and treatment of acute hepatitis in the Emergency Department.
- ♦ Explain the diagnosis and treatment of pancreatitis in the Emergency Department.
- ♦ Explain the diagnosis and treatment of appendicitis in the Emergency Department.
- ♦ Explain the diagnosis and treatment of diverticulitis and perirectal abscess in the Emergency Department.
- ♦ Explain the diagnosis and treatment of typhlitis in the Emergency Department.
- ♦ Explain the diagnosis and treatment of peritonitis in the Emergency Department.
- ♦ Explain the diagnosis and treatment of an intraperitoneal abscess in the Emergency Department.

03

# Course Management

The program's teaching staff includes leading specialists in Lower Airway and Intra-Abdominal Infections in the Emergency Room and other related areas, who bring their years of work experience to this training program. Additionally, other recognized specialists participate in its design and preparation, which means that the program is developed in an interdisciplinary manner.







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*The best professionals in infectious diseases  
have designed this program for you so that you  
can reach a professional level”*

## Management



### Dr. García del Toro, Miguel

- ♦ PhD in Medicine from the University of Valencia
- ♦ Head of the Infectious Diseases Service at the General University Hospital Consortium of Valencia.
- ♦ 50 national and international publications in journals and books, 33 of them indexed in Pubmed and/or Scopus
- ♦ President Congress of the National Group for the Study of Hepatitis of the Society for Infectious Diseases and Clinical Microbiology 2017
- ♦ More than 200 communications in National and International Congresses in the specialty of Infectious Diseases, HIV and Viral Hepatitis
- ♦ Head Researcher of some twenty Clinical Trials and/or Research Projects



### Ms. García Rodríguez, Magdalena

- ♦ Degree in Medicine and Surgery
- ♦ Specialist in Internal Medicine
- ♦ Attending Physician in the Infectious Diseases Unit and the Consorcio General Hospital Valencia
- ♦ Head of the International Health and Travel Advice Section
- ♦ Author of several publication and research projects
- ♦ Founding member and advisor of the Chagas Disease Association of the Valencian Community
- ♦ Member of a vaccine study group for the Spanish Society of Infectious Diseases and Clinical Microbiology.
- ♦ Member of a Malaria study group for the Spanish Society of Infectious Diseases and Clinical Microbiology.



### Ms. Ricart Olmos, María del Carmen

- Degree in Medicine and Surgery
- Specialist in Internal Medicine
- Attending Physician in the Infectious Diseases Unit and the Consorcio General University Hospital, Valencia
- Author of several publication and research projects
- Editor of the Consensus Document on Age and Human Immunodeficiency Virus Infection Expert Group of the Secretariat of the National AIDS Plan (SPNS), Spanish Society of Geriatrics and Gerontology (SEGG)
- Master's Degree in Infectious Diseases in Intensive Care

04

# Structure and Content

The structure of the contents has been designed by a team of professionals from the best hospitals and universities in the country, who are aware of the relevance of up-to-date training to be able to intervene in the treatment and monitoring of Lower Airway and Intra-Abdominal Infections in the Emergency Room, and who are committed to quality teaching through new educational technologies.





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*This Postgraduate Certificate contains the most complete and up-to-date scientific program on the market”*

## Module 1. Infections of Organs and Apparatus : Lower Airway and Intra-abdominal

- 1.1. Acute Bronchitis
  - 1.1.1. Definition
  - 1.1.2. Clinical Manifestations
  - 1.1.3. Diagnosis
  - 1.1.4. Treatment
- 1.2. Acute Chronic Obstructive Pulmonary Disease (COPD)
  - 1.2.1. Definition
  - 1.2.2. Diagnosis
  - 1.2.3. Treatment
  - 1.2.4. Attitude to Clinical Failure
  - 1.2.5. Key Concepts
- 1.3. Community-Acquired Pneumonia (CAP)
  - 1.3.1. Concept
  - 1.3.2. Pathophysiology
  - 1.3.3. Epidemiology
  - 1.3.4. Etiology
  - 1.3.5. Clinical Manifestations
  - 1.3.6. Diagnostic Attitude
  - 1.3.7. Antibiotic Treatment
- 1.4. Healthcare-Associated Pneumonia (HAP)
  - 1.4.1. Concept
  - 1.4.2. Healthcare-Associated Pneumonia Versus Community-Acquired Pneumonia due to Resistant Pathogens (CAP-PR)
  - 1.4.3. Etiology
  - 1.4.4. Microbiological Diagnosis
  - 1.4.5. Empirical Treatment
  - 1.4.6. Prognosis





- 1.5. Pneumonic Pleural Effusion and Empyema
  - 1.5.1. Clinical Symptoms
  - 1.5.2. Staging
  - 1.5.3. Imaging Tests
  - 1.5.4. Laboratory Studies: Pleural Fluid Analysis
  - 1.5.5. Pathophysiology Staging
  - 1.5.6. Bacteriology
  - 1.5.7. Prognosis
  - 1.5.8. Treatment
- 1.6. Pulmonary Abscess
  - 1.6.1. Definition
  - 1.6.2. Etiology
  - 1.6.3. Pathophysiology
  - 1.6.4. Clinical Manifestations
  - 1.6.5. Diagnosis
  - 1.6.6. Treatment
- 1.7. Pulmonary Tuberculosis
  - 1.7.1. Etiology
  - 1.7.2. Clinical Manifestations
  - 1.7.3. Diagnosis
  - 1.7.4. Treatment
- 1.8. Gastroenteritis
  - 1.8.1. Etiology
  - 1.8.2. Clinical Manifestations and Physical Examination
  - 1.8.3. Laboratory Data and Imaging Tests.
  - 1.8.4. Diagnosis
  - 1.8.5. Treatment
- 1.9. Liver and Biliary Tract Infections
  - 1.9.1. Bacterial Infections which Affect the Liver
  - 1.9.2. Viral Infections which Affect the Liver
  - 1.9.3. Parasitic Infections which Affect the Liver
  - 1.9.4. Fungal Infections which Affect the Liver

- 1.10. Cholecystitis and Cholangitis
  - 1.10.1. Acute Cholecystitis
  - 1.10.2. Acute Cholangitis
- 1.11. Liver Abscesses
  - 1.11.1. Concept and General Characteristics
  - 1.11.2. Classification and Etiopathogenesis
  - 1.11.3. Pyogenic Hepatic Abscesses
  - 1.11.4. Amoebic Liver Abscesses
- 1.12. Acute Hepatitis
  - 1.12.1. Definition
  - 1.12.2. Etiology
  - 1.12.3. Clinical Manifestations and Physical Examination
  - 1.12.4. Laboratory Data
  - 1.12.5. Diagnosis
  - 1.12.6. Severe Acute Hepatitis
  - 1.12.7. Severe Acute Liver Failure
  - 1.12.8. Treatment
- 1.13. Pancreatitis
  - 1.13.1. Etiology
  - 1.13.2. Diagnosis
  - 1.13.3. Classification
  - 1.13.4. Severity Prediction and Prognostic
  - 1.13.5. Treatment
  - 1.13.6. Infectious Complications
- 1.14. Appendicitis
  - 1.14.1. Epidemiology
  - 1.14.2. Etiopathogenesis
  - 1.14.3. Microbiology
  - 1.14.4. Diagnosis
  - 1.14.5. Differential Diagnosis
  - 1.14.6. Treatment
  - 1.14.7. Preoperative Antibiotic Prophylaxis
  - 1.14.8. Postoperative Antibiotic Treatment
  - 1.14.9. Post-surgery Complications
- 1.15. Diverticulitis and Perirectal Abscess
  - 1.15.1. Definition of Diverticulitis
  - 1.15.2. Pathogenesis
  - 1.15.3. Risk Factors
  - 1.15.4. Diverticulitis Diagnosis
  - 1.15.5. Diverticulitis Classification
  - 1.15.6. Treatment for Diverticulitis
  - 1.15.7. Perirectal Abscess
- 1.16. Typhlitis
  - 1.16.1. Epidemiology
  - 1.16.2. Etiology
  - 1.16.3. Pathogenesis
  - 1.16.4. Clinical Manifestations
  - 1.16.5. Diagnosis
  - 1.16.6. Differential Diagnosis
  - 1.16.7. Treatment
- 1.17. Peritonitis
  - 1.17.1. Classification
  - 1.17.2. Pathogenesis
  - 1.17.3. Diagnosis
  - 1.17.4. Assess the Severity of the Infection
  - 1.17.5. Treatment



- 1.18. Spontaneous Bacterial Peritonitis
  - 1.18.1. Concept
  - 1.18.2. Epidemiology
  - 1.18.3. Pathogenesis
  - 1.18.4. Clinical Manifestations
  - 1.18.5. Diagnosis
  - 1.18.6. Prognosis
  - 1.18.7. Treatment
  - 1.18.8. Prophylaxis
- 1.19. Secondary Peritonitis
  - 1.19.1. Definition and Classification
  - 1.19.2. Microbiology
  - 1.19.3. Evaluation of Severity
  - 1.19.4. General Principles for the Management
- 1.20. Intraabdominal Abscess
  - 1.20.1. Definition
  - 1.20.2. Epidemiology
  - 1.20.3. Etiology and Pathophysiology
  - 1.20.4. Diagnosis
  - 1.20.5. Treatment



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

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 Lower Airway and Intra-Abdominal Infections in the Emergency Room guarantees, in addition to the most rigorous and up-to-date training, access to a Postgraduate Certificate issued by TECH Technological University.





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*Successfully complete this training program  
and receive your university certificate  
without travel or laborious paperwork”*

This **Postgraduate Certificate in Lower Airway and Intra-Abdominal Infections in the Emergency Room** contains the most complete and up-to-date scientific program on the market.

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

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

Title: **Postgraduate Certificate in Lower Airway and Intra-Abdominal Infections in the Emergency Room**

Official N° of Hours: **150 h.**



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

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



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Lower Airway and  
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Course Modality: **Online**

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Certificate: **TECH Technological University**

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## Lower Airway and Intra-Abdominal Infections in the Emergency Room

