

# Postgraduate Certificate Infectious Pathology in Critically ill Patients





## Postgraduate Certificate Infectious Pathology in Critically ill Patients

Course Modality: **Online**

Duration: **6 weeks**

Endorsed by: **TECH Technological University**

Official N° of hours: **175 h.**

Website: [www.techitute.com/us/medicine/postgraduate-certificate/infectious-pathology-critically-ill-patients](http://www.techitute.com/us/medicine/postgraduate-certificate/infectious-pathology-critically-ill-patients)

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01

# Introduction

The physician specialized in intensive care medicine faces daily Infectious pathologies that can compromise the life of critically ill patients, so a constant updating is vital to maintain the quality of the care they provide every day. This program includes the latest advances in the management of infectious diseases in the intensive care unit, and is presented in a practical way and tailored to your needs.



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*The new scenarios in intensive care medicine push us to propose new up-to-date programs that meet the real needs of experienced professionals, so that they can incorporate the advances in Infectious Diseases in Critically ill Patients"*

Severe sepsis has a high incidence and remains one of the leading causes of mortality despite continuous improvements in the care of critically ill patients. The approach to infectious pathology in critically ill patients is a very important aspect in the daily activity of the intensive care physician, since early diagnosis and treatment of sepsis leads to improved patient survival.

However, because the mechanisms of infection depend on many factors such as the patient's underlying conditions, the infectious agent or the environment of the intensive care unit, this approach is complex, so intensive care units must be equipped with the latest technology, appropriate drugs and, of course, an updated team of professionals capable of making decisions based on the latest scientific evidence and offering the close and respectful support needed by the patient and their family.

This Postgraduate Certificate in Infectious Pathology in Critically Ill Patients is designed to facilitate the updating of the specialist physician in a practical way and adapted to their needs. Through this program you will obtain a useful approach for your daily clinical practice and will be able to respond to the specific problems and situations you will face in your work practice.

The **Postgraduate Certificate in Infectious Pathology in Critically Ill Patients** contains the most complete and updated scientific program on the market. The most important features of the course are:

- Clinical cases presented by experts in Intensive Care Medicine. 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
- Diagnostic and therapeutic innovations in critically ill patients with severe infectious diseases
- Interactive learning system based on algorithms for decision making on different clinical situations
- All of this will be complemented by theoretical lessons, questions to the expert, debate forums on controversial topics, and individual reflection assignments
- Content that is accessible from any fixed or portable device with an Internet connection



*Update your knowledge through the Postgraduate Certificate in Infectious Pathology in Critically Ill Patients, in a practical way and adapted to your needs"*

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*This Postgraduate Certificate may be the best investment you can make when choosing an up-to-date program for two reasons: in addition to updating your knowledge in Infectious Pathology in Critically Ill Patients you will obtain a qualification from TECH Technological University"*

Forming part of the teaching staff is a group of professionals in the world of Intensive Care Medicine, who bring to this course their work experience, as well as a group of renowned specialists, recognised by esteemed scientific communities.

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 program to train in real situations.

This program is designed around Problem Based Learning, whereby the student must try to solve the different professional practice situations that arise during the course. This will be done with the help of an innovative interactive video system developed by renowned experts in the field of Intensive care medicine with extensive teaching experience.

*This online methodology allows you, through clinical cases, to practice in a simulated environment.*

*Take the opportunity to update your knowledge in infectious pathology in critically ill patients.*



# 02 Objectives

The main objective of the program is the development of theoretical and practical learning, so that the physician can master in a rigorous way the organisation of an Intensive Care Unit.



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*This refresher program will generate a sense of confidence when practising medicine, which will help you grow both personally and professionally”*



## General Objective

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- Update the intensive care physician in the management procedures of critically ill patients with severe infection, with special attention to severe sepsis and infectious pathologies that most frequently require admission to the ICU





## Specific Objectives

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- ◆ Update procedures for the Management of severe sepsis
- ◆ Analyze antibiotic policy in the ICU and resistance management
- ◆ Describe bacteremia, catheter sepsis and endocarditis in the ICU
- ◆ Analyze the role of procalcitonin in the management of infection in the ICU
- ◆ Point out the key points in the management of fungal infections in the ICU
- ◆ Define severe pneumonia: community, nosocomial and associated with mechanical ventilation
- ◆ Describe the signs and symptoms of meningoencephalitis



*Take the opportunity and take the step to get up to date on the latest developments in the approach to infectious pathology in the critically ill patient.*

03

# Structure and Content

The structure of the contents has been designed by a team of professionals knowledgeable about the implications of training in daily medical practice in critical patient care, aware of the relevance of training to be able to act before the patient with Infectious pathology and committed to quality teaching through new educational technologies.



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*The Postgraduate Certificate in Infectious Pathology in Critically ill Patients, contains the most complete and updated scientific program on the market”*

### Module 1. Current Management of Severe Sepsis

- 1.1. Key Points in the Management of Severe Sepsis
- 1.2. Controversies in the Treatment of Severe Sepsis
- 1.3. Sepsis Code - Sepsis Units
- 1.4. Protocol Proposal

### Module 2. Antibiotherapy in the ICU

- 2.1. Antibiotic Use Policy in the ICU
- 2.2. Managing Resistance
- 2.3. Zero Resistance Project

### Module 3. Severe Abdominal Infection in the ICU

- 3.1. Acute Abdomen and Peritonitis
- 3.2. Postoperative Period of Complicated Abdominal Surgery. Tertiary Peritonitis

### Module 4. Intravascular Infections in the ICU

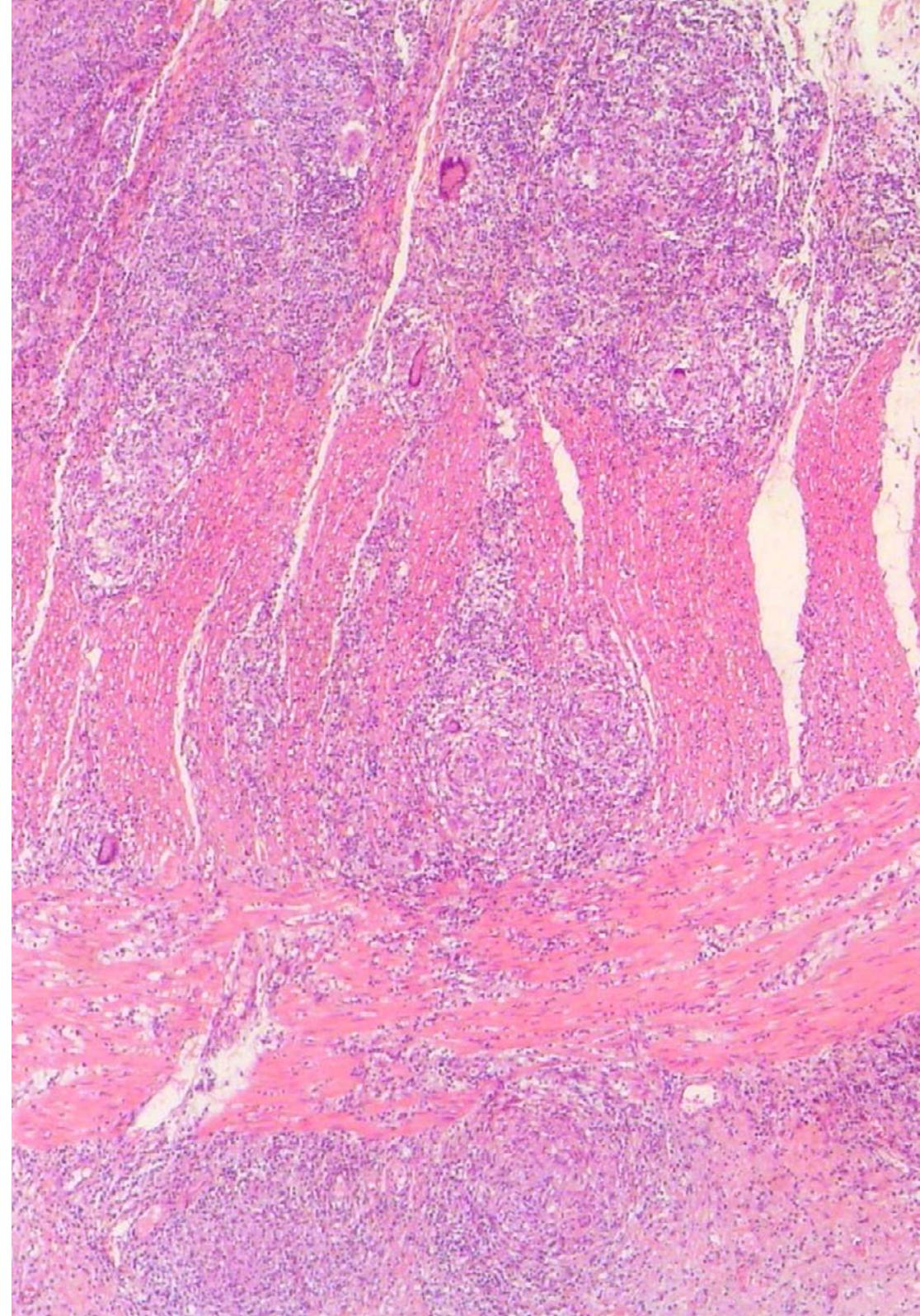
- 4.1. Bacteremia
- 4.2. Catheter Sepsis
- 4.3. Endocarditis
- 4.4. Zero Bacteremia Project

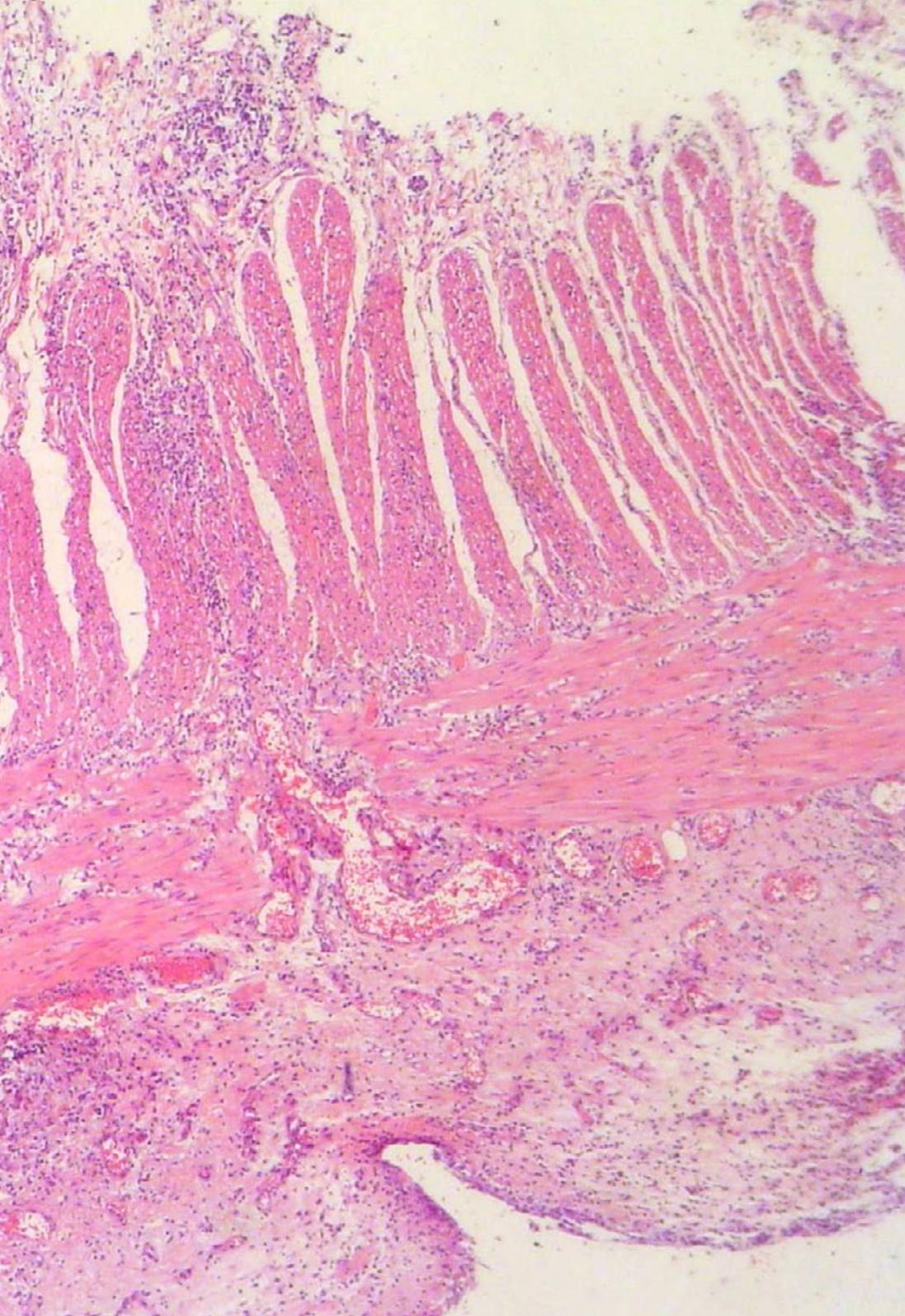
### Module 5. Role of Procalcitonin in the Management of Infection in the ICU

- 5.1. Diagnosis of Infection
- 5.2. Prognostic Role
- 5.3. Duration of Antibiotherapy

### Module 6. Key Points in the Management of Fungal Infection in the ICU

- 6.1. Diagnosis of Suspicion and Confirmation
- 6.2. Prophylactic and Early Treatment
- 6.3. Antifungal Drugs





### Module 7. Severe Pneumonia

- 7.1. Community-Acquired Pneumonia
- 7.2. Nosocomial Pneumonia
- 7.3. Pneumonia in an Immunosuppressed Patient
- 7.4. Pneumonia Associated with Mechanical Ventilation

### Module 8. Meningoencephalitis

- 8.1. Bacterial Meningitis. Key Management Points
- 8.2. Viral Encephalitis
- 8.3. Other Encephalitis



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

04

# 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

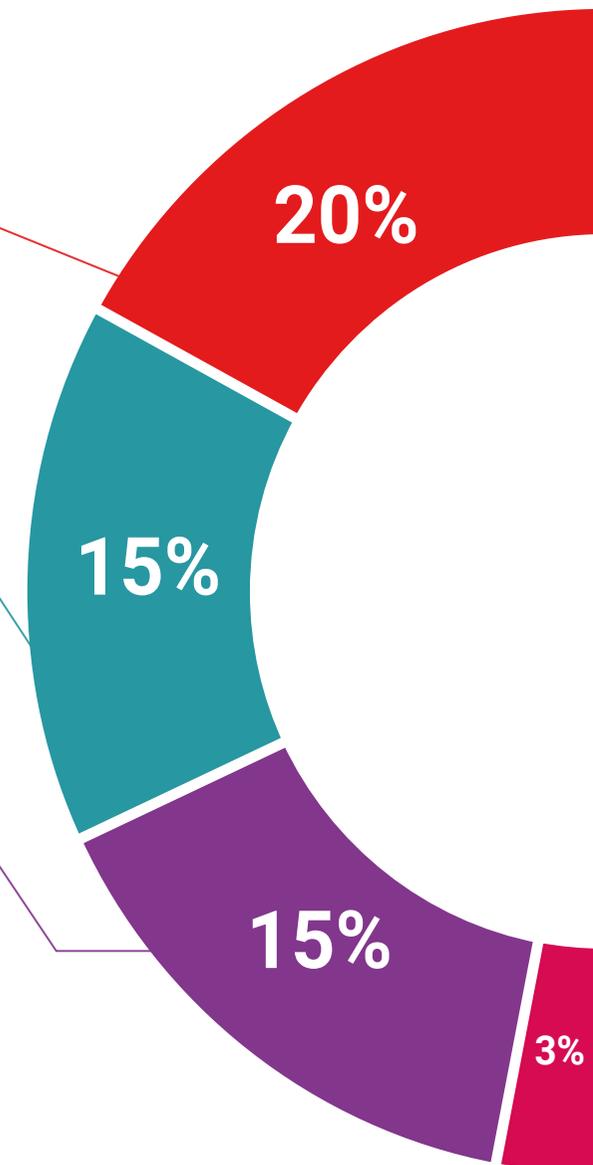
The TECH team presents the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

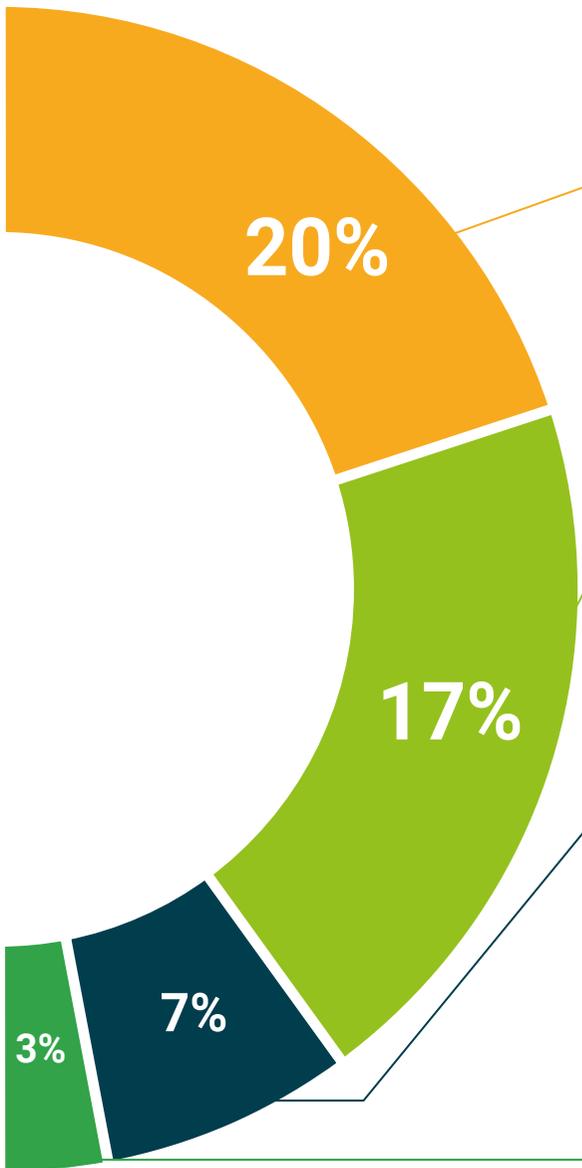
This exclusive educational system for presenting multimedia content was awarded by Microsoft as a "European Success Story".



#### 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.



# 05 Certificate

The Postgraduate Certificate in Infectious Pathology in Critically ill Patients guarantees you, in addition to the most rigorous and updated training, access to a Postgraduate Certificate issued by TECH Technological University.





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

The **Postgraduate Certificate in Infectious Pathology in Critically ill Patients** contains the most complete and updated scientific program on the market.

Once the student has passed the evaluations, they will receive their corresponding Postgraduate Certificate issued by **TECH Technological University**.

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

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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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