

# Postgraduate Certificate

## Epidemiology and Microbiology in Infectious Diseases



## Postgraduate Certificate Epidemiology and Microbiology in Infectious Diseases

Course Modality: **Online**

Duration: **6 weeks**

Certificate: **TECH Technological University**

**4 ECTS Credits**

Teaching Hours: **100 hours.**

Website: [www.techtitute.com/medicine/postgraduate-certificate/epidemiology-microbiology-infectious-diseases](http://www.techtitute.com/medicine/postgraduate-certificate/epidemiology-microbiology-infectious-diseases)

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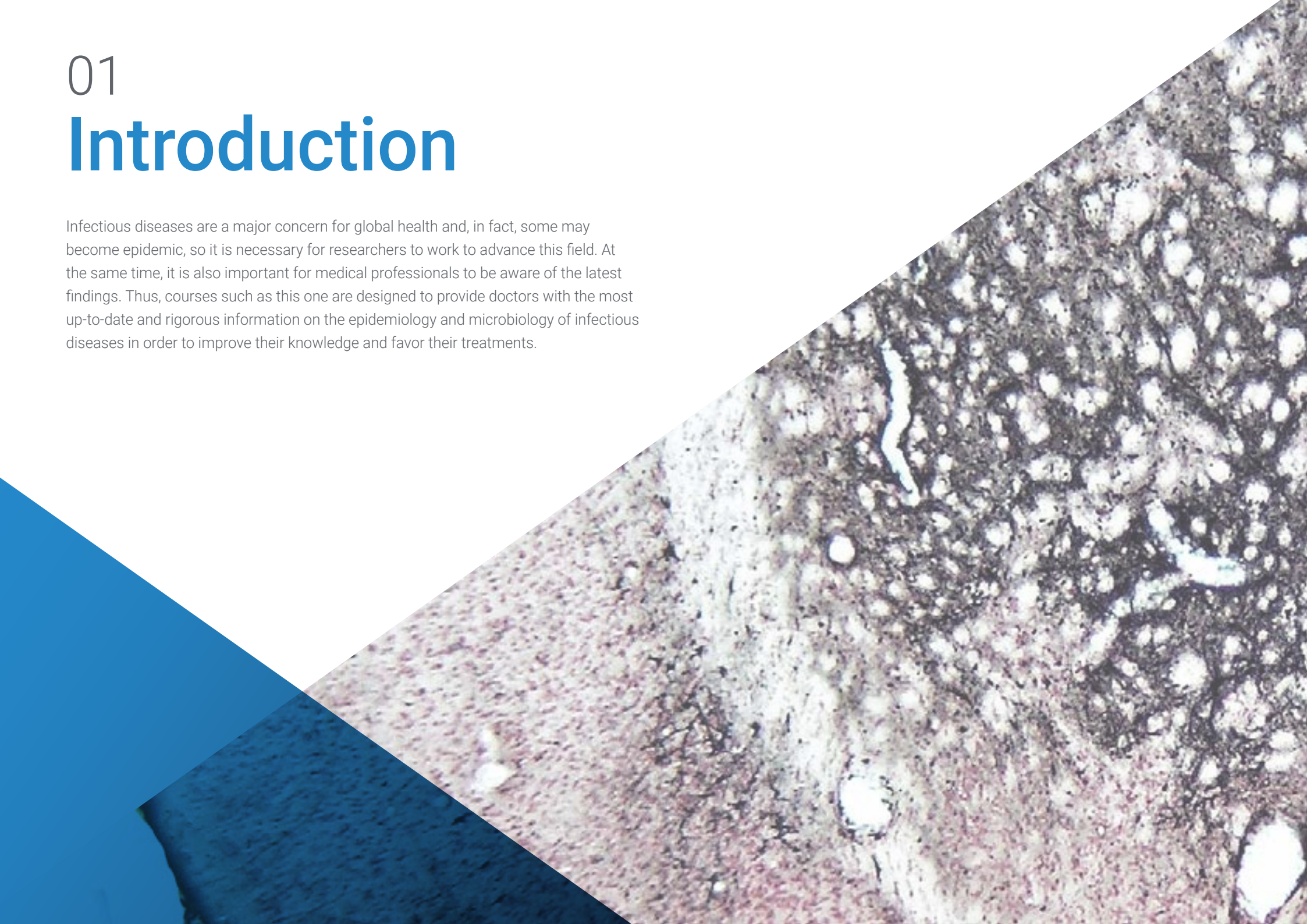
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01

# Introduction

Infectious diseases are a major concern for global health and, in fact, some may become epidemic, so it is necessary for researchers to work to advance this field. At the same time, it is also important for medical professionals to be aware of the latest findings. Thus, courses such as this one are designed to provide doctors with the most up-to-date and rigorous information on the epidemiology and microbiology of infectious diseases in order to improve their knowledge and favor their treatments.







“

*Improve your knowledge in Epidemiology and Microbiology in Infectious Diseases through this program, where you will find the best didactic material with real clinical cases. Learn here about the latest advances in the specialty to be able to perform a quality medical practice”*

Infectious diseases are re-emerging as a top priority worldwide, and to meet the needs of the 21st century, health care professionals must have a solid understanding of clinical infectious diseases. This makes it vitally important for physicians to continue their training with a **Postgraduate Certificate** such as this one, where they can learn first-hand about advances in different types of infections.

The development and spread of bacterial resistance to antibiotics is one of the main problems of infection control in most countries, and it is considered one of the main health problems worldwide.

Another challenge in relation to infectious diseases is the emergence in recent years of several new diseases with high morbidity, which requires a significant level of updating to prevent new contagions and reduce the morbidity figures due to infections.

Therefore, healthcare professionals, regardless of where they work, can see in this **Postgraduate Certificate** the opportunity to study a program that comprises the most advanced and in-depth knowledge of the most important health problems in the field of infectious diseases and antimicrobial treatment, where a group of professors of high scientific rigor and wide international experience presents the most complete and up-to-date information on the prevention, diagnosis, treatment and care of individual patients and population groups suffering from the most prevalent and deadly infectious diseases.

In this case, the program focuses on the epidemiology and microbiology of infectious diseases, emphasizing the conditions that lead certain continents to be prone to the development of certain pathologies.

This **Postgraduate Certificate in Epidemiology and Microbiology in Infectious Diseases** contains the most complete and up-to-date scientific program on the market.

The most important features of the course are:

- Firstly, Clinical features, in order to address the health-infectious disease process in a particular person through the study of the most prevalent and deadly infectious diseases and, secondly, in Epidemiologic features, to study the behavior of the same phenomenon in a particular population.
- Training and professional development in the indication, performance and interpretation of the main state-of-the-art diagnostic tests to complement clinical skills in the diagnostic process. Emphasizing the most up-to-date microbiological tests used to rapidly diagnose germs and study antimicrobial resistance.
- Training and professional development in the complex and determining pathophysiological relationships between immune response and infectious agents.
- Training and professional development in germs related to neoplasms and chronic non-communicable diseases.
- Training and professional development in the development and production of vaccines for the control of morbidity and mortality due to infectious diseases.
- Training and professional development in the important field of antimicrobial therapeutics, providing the best available information on the development and production of new antibiotics.



*Update your knowledge through this Postgraduate Certificate in Epidemiology and Microbiology in Infectious Diseases”*

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*This Postgraduate Certificate may be the best investment you can make in the selection of a refresher program for two reasons: in addition to updating your knowledge of Epidemiology and Microbiology in Infectious Diseases, you will obtain a university degree from TECH Technological University”*

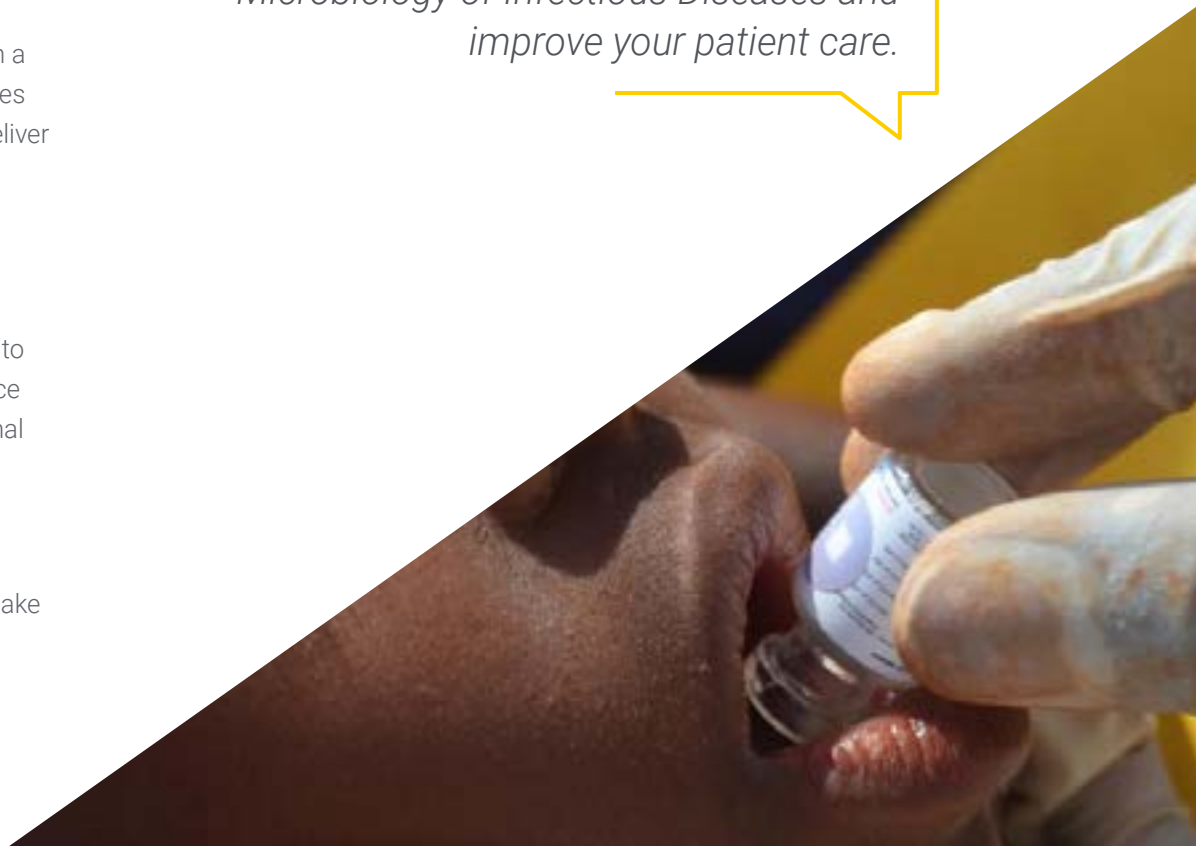
Its teaching staff is made up of prestigious and renowned Cuban professionals with a long career in health care, teaching and research, who have worked in many countries on several continents, developing professional and teaching experience that they deliver in an extraordinary way in this **Postgraduate Certificate**.

The methodological design of this **Postgraduate Certificate**, developed by a multidisciplinary team of e-learning experts, integrates the latest advances in educational technology for the creation of numerous educational multimedia tools that allow the professional, based primarily on the problem-based learning method, to address real problems in their daily clinical practice, which will allow them to advance by acquiring knowledge and developing skills that will impact their future professional work.

It should be noted that the contents generated for this **Postgraduate Certificate**, as well as the videos, self-evaluations, clinical cases and exams, have been thoroughly reviewed, updated, and integrated by the professors and the team of experts that make up the work group to facilitate the learning process with a step-by-step approach in order to achieve the teaching program objectives.

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

*Take the opportunity to learn about the latest advances in Epidemiology and Microbiology of Infectious Diseases and improve your patient care.*





02

# Objectives

The main objective of this **Postgraduate Certificate** is the improvement of health professionals, based on the acquisition of the most up-to-date and innovative scientific knowledge in the field of infectious diseases and their treatment, enabling them to develop the skills that will turn their daily clinical practice into a bastion of the standards of the best scientific evidence available, with a critical, innovative, multidisciplinary and integrative focus.





A close-up photograph of several petri dishes containing bacterial cultures. The cultures are visible as various colored colonies (yellow, orange, white) on a blue agar medium. The dishes are arranged in a stack, with the top one being the most prominent.

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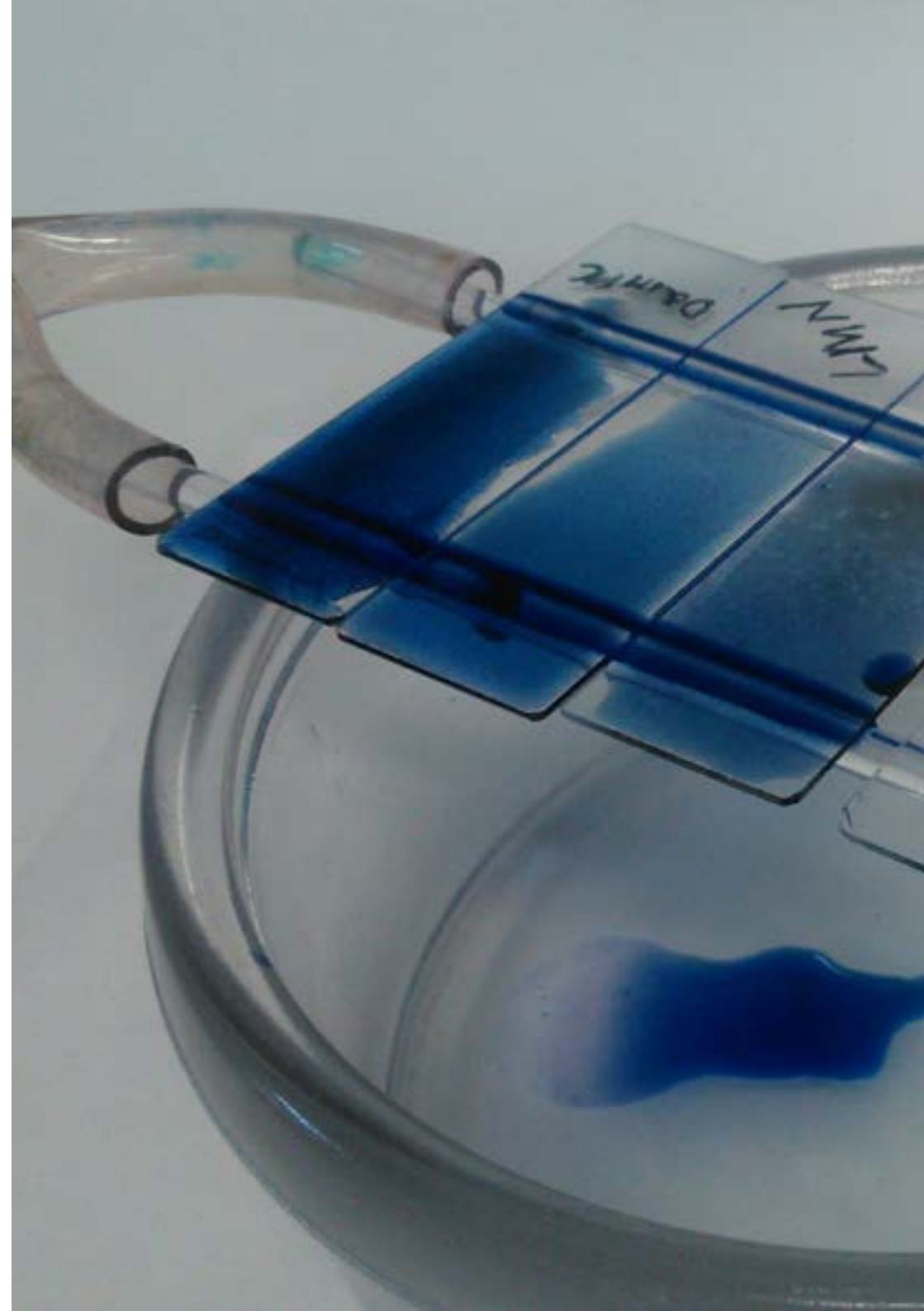
*This Postgraduate Certificate is designed to help you update your knowledge of Epidemiology and Microbiology in Infectious Diseases, with the use of the latest educational technology, to contribute quality and confidence to decision-making, diagnosis, treatment, and patient support”*



## General Objective

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- Guarantee professional improvement through up-to-date and in-depth knowledge of the best scientific evidence, for the prevention, diagnosis, and treatment of infectious diseases with a multidisciplinary and integrative approach that facilitates the control of these pathologies.





## Specific Objectives

- ◆ Provide students with advanced, in-depth, updated, and multidisciplinary information that allows them to comprehensively approach the process of health-infectious diseases.
- ◆ Provide training and practical theoretical improvement that will enable a reliable clinical diagnosis supported by the efficient use of diagnostic methods to indicate an effective integral treatment.
- ◆ Assess and interpret the epidemiological characteristics and conditions of the different continents where the appearance and development of infectious diseases often occur.
- ◆ Address the important role of microbiology and the infectologist in the control of infectious diseases.

*Update your knowledge through  
this Postgraduate Certificate in  
Epidemiology and Microbiology in  
Infectious Diseases.*



03

# Course Management

Renowned and recognized medical specialists with numerous publications, teaching experience, and professional experience in many countries, where many of the diseases studied have a high morbimortality, participate in the teaching program. The teaching staff is made up of a multidisciplinary team from various medical specialities, such as internal medicine, paediatrics, general surgery, gynaecology and obstetrics, microbiology, pathological anatomy, pharmacology, among others.





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*Learn from leading professionals the latest advances in infectious diseases and antibiotic management”*

## Guest Director



### Dr. Díaz Pollán, Beatriz

- Faculty Area Specialist La Paz University Hospital Since 2013
- Official Doctoral Programme in Clinical Medicine. Rey Juan Carlos University. 2014
- Degree in Medicine and Surgery. Autonomous University of Madrid. 1995
- Masters in Infectious Diseases and Antimicrobial Treatment. CEU - Cardenal Herrera University. 2018
- University Expert in Community and Nosocomial Infections. CEU - Cardenal Herrera University. 2018
- University Expert in Chronic Infectious Diseases and Imported Infections. CEU - Cardenal Herrera University. 2018
- University Expert in Microbiological Diagnosis, Antimicrobial Treatment and Research in Infectious Pathology. CEU - Cardenal Herrera University. 2018
- Faculty Area Specialist San Carlos Clinical Hospital 2001-2013
- Resident doctor. San Carlos Clinical Hospital 1996-2001



## Co-Direction



### **Dr. Quintero Casanova, Jesús**

- Attending physician and professor of medicine. General Teaching Hospital Héroes del Baire
- 1st and 2nd Degree Specialist in Internal Medicine
- Assistant Professor of the Speciality
- Master's Degree in Clinical Infectious and Tropical Diseases
- Teacher of Excellence Award. FCM IJ. 2009
- Alma Mater Prize of the FEU (in the years: 2008, 2009, 2015, 2016 y 2017)

## Professors

### Dr. Rico, Alicia

- ◆ Specialist in the Microbiology and Parasitology Department at La Paz University Hospital. Madrid 2020
- ◆ Degree in Medicine from the Complutense University Madrid. 1998
- ◆ Doctorate Courses at the Complutense University of Madrid.
- ◆ Assistant and co-founder of the Infectious Diseases and Clinical Microbiology Unit. La Paz University Hospital Madrid Since 2007
- ◆ PROA team member. Since 2010
- ◆ Clinical teaching collaborator. Department of Medicine of the UAM. Since 2015
- ◆ Member of the Infections and Policy Committee. La Paz Hospital Since 2016
- ◆ Member of SEIMC (the Spanish Society of Infectious Diseases and Clinical Microbiology). Since 2000
- ◆ Participation in several research projects

### Dr. Arribas López, José Ramón

- ◆ Head of the Infectious Diseases and Clinical Microbiology Unit. La Paz University Hospital Since 2015
- ◆ Doctor of Medicine Autonomous University of Madrid. 1993
- ◆ Degree Medicine and Surgery. Complutense University of Madrid. 1985
- ◆ Coordinator of the High-Level Isolation Unit. La Paz University Hospital– Carlos III
- ◆ Member Interministerial Committee for the management of the Ebola crisis
- ◆ Head of the AIDS and Infectious Diseases research group at IdiPAZ

### Dr. Mora Rillo, Marta

- ◆ Specialist in the area of Infectious Diseases at La Paz University Hospital. Since 2008
- ◆ Clinical Teaching Collaborator in the Department of Medicine. Autonomous University of Madrid. Since 2017
- ◆ Doctor of Medicine Autonomous University of Madrid. 2013
- ◆ Degree in Medicine and Surgery. University of Zaragoza. 1999
- ◆ Master's Degree in Infectious Diseases in Intensive Care. University of Valencia. 2018
- ◆ Online Masters in Infectious Diseases and Antimicrobial Treatment CEU Cardenal Herrera University. 2017
- ◆ Master's Degree in Tropical Medicine and International Health. Autonomous University of Madrid. 2014
- ◆ Expert in Emerging and High-Risk Virus Pathology. Autonomous University of Madrid. 2019
- ◆ Expert in Tropical Medicine. Autonomous University of Madrid. 2012

### Dr. Ramos, Juan Carlos

- ◆ Doctor at La Paz University Hospital. Madrid Since 2013
- ◆ Official Doctoral Programme in Medicine. University of Alcalá. 2006
- ◆ Degree Medicine and Surgery. Complutense University of Madrid. 1994
- ◆ Master's Degree in Infectious Diseases in Intensive Care. Fundación Universidad-Empresa Valencia. 2019
- ◆ Author of Several Scientific Publications

**Dr. Loeches Yagüe, María Belén**

- ♦ Specialist in the area of Infectious Diseases at La Paz General University Hospital, Madrid. Since 2012.
- ♦ Doctor of Medicine Autonomous University of Madrid. 2017
- ♦ Degree in Medicine. Complutense University of Madrid. 1999
- ♦ Master in Theoretical and Practical Learning in Infectious Diseases. Complutense University of Madrid. 2009
- ♦ Specialised Training in Microbiology and Infectious Diseases. Gregorio Marañón General University Hospital. 2005-2009
- ♦ Professor of Infectious Diseases at the Infanta Sofía University Hospital in Madrid. European University of Madrid. 2013-2015

**Dr. Álvarez Almanza, Evaristo Delfín**

- ♦ Degree in Medicine and Surgery from the University of Havana. Cuba.
- ♦ Specialist in Microbiology and Parasitology at the Pedro Kouri Institute. Cuba.
- ♦ Master's Degree in Infectious Diseases from the Pedro Kouri Institute of Cuba.
- ♦ Head of the Microbiology Department of the Héroes del Baire Hospital.
- ♦ Member of the Cuban Society of Microbiology.
- ♦ Member of the Cuban Society of Teachers.
- ♦ Medical specialist in Columbia, 2006-07.
- ♦ Professor on the Medicine Degree in the Faculty of Medical Sciences in Isla de la Juventud.
- ♦ Professor of the Professional Master's Degree in Infectious Diseases in the Faculty of Medical Sciences in Isla de la Juventud.
- ♦ Member of state examining boards medicine.
- ♦ Member of tribunals for national scientific events. Cuba
- ♦ Medical Science Teaching Award. Cuba.

**Dr. Batista Valladares, Adrián**

- ♦ Degree in Medicine and Surgery from the University of Havana. Cuba.
- ♦ Specialist in Family and Community Medicine.
- ♦ Master's Degree in Clinical Infectology.
- ♦ Diploma in diagnostic ultrasound.
- ♦ Diploma in Healthcare Management.
- ♦ Head of Senior Citizen Services in Isla de la Juventud. Cuba.
- ♦ Member of the Cuban Society of Family Medicine.
- ♦ Professor of the medicine and family medicine degrees at the Faculty of Medical Sciences in Isla de la Juventud.
- ♦ Professor of the Professional Master's Degree in Infectious Diseases in the Faculty of Medical Sciences in Isla de la Juventud.
- ♦ Member of state examining boards for the medicine degree and family medicine.
- ♦ Member of tribunals for national scientific events. Cuba.

**Dr. Caro Díaz, Daylien**

- ♦ Degree in Medicine and Surgery from the University of Havana. Cuba.
- ♦ Specialist in Medical Emergencies and Intensive Care. Héroes del Baire Hospital.
- ♦ Master's degree in emergency medical care.
- ♦ Member of the Cuban Society of Emergency and Intensive Care Medicine.
- ♦ Professor of Medicine and Emergency Medicine at the Faculty of Medical Sciences on the Isle of Youth.
- ♦ Member of tribunals for national scientific events. Cuba.
- ♦ Medical Specialist in Honduras in 2012-2016.



**Dr. Dranguet Bouly, José Ismael**

- ♦ Degree in Medicine and Surgery from the University of Havana. Cuba.
- ♦ Specialist in Internal Medicine and Intensive Therapy. Héroes del Baire Hospital.
- ♦ Master's Degree in Infectious Diseases from the Pedro Kouri Institute of Cuba.
- ♦ Head of the Internal Medicine Department of the Héroes del Baire Hospital.
- ♦ Member of the Cuban Society of Internal medicine and the Cuban Society of Intensive Therapy.
- ♦ Member of the Cuban Society of Teachers.
- ♦ Medical specialist in Mozambique, 2008-10.
- ♦ Professor on the Medicine Degree and Internal Medicine Specialty at the Faculty of Medical Sciences of Isla de la Juventud.
- ♦ Professor of the Professional Master's Degree in Infectious Diseases in the Faculty of Medical Sciences in Isla de la Juventud.
- ♦ Member of state examining boards for the medicine degree and internal medicine.
- ♦ Member of tribunals for national scientific events. Cuba
- ♦ Medical Science Teaching Award. Cuba.
- ♦ Professor at the Catholic University of Santiago de Guayaquil Ecuador, 2018.

**Dr. Jiménez Valdés, Erlivan**

- ♦ Degree in Medicine and Surgery from the University of Havana. Cuba.
- ♦ Pediatrician. Héroes del Baire Hospital.
- ♦ Master's Degree in comprehensive childcare.
- ♦ Member of the Cuban Society of Pediatrics.
- ♦ Professor in the Medicine Degree and Pediatrics Specialty in the Faculty of Medical Sciences in Isla de la Juventud.
- ♦ Member of tribunals for national scientific events. Cuba.
- ♦ Medical specialist in Venezuela in 2017.

**Dr. Dávila, Henry Luis**

- ♦ Degree in Medicine and Surgery from the University of Havana. Cuba.
- ♦ Specialist in Gynecology and Obstetrics at Héroes del Baire Hospital. Cuba.
- ♦ Professional Master's Degree in Comprehensive Care for Women.
- ♦ Head of the Neck Pathology Service at Héroes del Baire Hospital.
- ♦ Member of the Cuban Society of Gynecology and Obstetrics.
- ♦ Member of the Cuban Society of Teachers.
- ♦ Medical specialist in Guatemala, 2010-12.
- ♦ Professor on the Medicine Degree in the Faculty of Medical Sciences in Isla de la Juventud.
- ♦ Member of state examining boards medicine.
- ♦ Member of tribunals for national scientific events. Cuba
- ♦ National research award. Cuba
- ♦ Medical Science Teaching Award. Cuba

**Dr. Núñez González, Lisbel**

- ♦ Degree in Medicine and Surgery from the University of Havana. Cuba.
- ♦ Specialist in Family and Community Medicine.
- ♦ Diploma in Pathological Anatomy.
- ♦ Dean of the Faculty of Medical Sciences in Isla de la Juventud. 2009-2011.
- ♦ Member of the Cuban Society of Family Medicine.
- ♦ Medical specialist in Venezuela in 2009, 2003-05.
- ♦ Professor of the medicine and family medicine degrees at the Faculty of Medical Sciences in Isla de la Juventud.
- ♦ Member of state examining boards for the medicine degree and family medicine.
- ♦ Member of tribunals for national scientific events. Cuba
- ♦ Medical Science Teaching Award. Cuba.

**Dr. Peña Fernández, Margarita**

- ♦ Degree in Medicine and Surgery from the University of Havana. Cuba.
- ♦ Specialist in Family and Community Medicine.
- ♦ Master's Degree in Clinical Infectology.
- ♦ Head of primary health care services on the Isle of Youth. Cuba.
- ♦ President of the Council of Scientific Societies on the Isle of Youth.
- ♦ Member of the Cuban Society of Family Medicine.
- ♦ Medical Specialist in Zimbabwe in 2009, 2003-05.
- ♦ Medical Specialist in Angola, 2011-13.
- ♦ Professor of the medicine and family medicine degrees at the Faculty of Medical Sciences in Isla de la Juventud.
- ♦ Professor of the Professional Master's Degree in Infectious Diseases in the Faculty of Medical Sciences in Isla de la Juventud.
- ♦ Member of state examining boards for the medicine degree and family medicine.
- ♦ Member of tribunals for national scientific events. Cuba
- ♦ Medical Science Teaching Award. Cuba.

**Dr. Pérez Suárez, Frank**

- ♦ Degree in Medicine and Surgery from the University of Havana. Cuba.
- ♦ Specialist in Gastroenterology from the National Institute of Gastroenterology of Cuba.
- ♦ Head of the Gastroenterology Service at the Calixto García Hospital in Cuba.
- ♦ Member of the Cuban Society of Gastroenterology.
- ♦ Medical Specialist in Quito, Ecuador, 2013-present.
- ♦ Professor in the Medicine Degree and Pediatrics Gastroenterology in the Faculty of Medical Sciences in Isla de la Juventud.
- ♦ Member of tribunals for national scientific events. Cuba.

**Dr. Pérez Suárez, Yovany**

- ♦ Degree in Medicine and Surgery from the University of Havana. Cuba.
- ♦ Specialist in Internal Medicine. Héroes del Baire Hospital.
- ♦ Master's degree in comprehensive emergency care.
- ♦ Diploma in Medical Biochemistry.
- ♦ Member of the Cuban Society of Internal Medicine.
- ♦ Medical specialist in Ecuador and professor at the Secular University Eloy Alfaro of Manabí in the years 2013-2018.
- ♦ Professor on the Medicine Degree and Internal Medicine Specialty at the Faculty of Medical Sciences of Isla de la Juventud.
- ♦ Member of tribunals for national scientific events. Cuba

**Dr. Viera Paz, Adriel**

- ♦ Degree in Medicine and Surgery from the University of Havana. Cuba.
- ♦ Specialist in Family and Community Medicine and Intensive Care.
- ♦ Master's degree in comprehensive emergency care.
- ♦ Member of the Cuban Society of Family medicine and the Cuban Society of Intensive Therapy.
- ♦ Professor of Medicine and Family Medicine and Intensive Care at the Faculty of Medical Sciences of the Isle of Youth.
- ♦ Professor of the Professional Master's Degree in Infectious Diseases in the Faculty of Medical Sciences in Isla de la Juventud.
- ♦ Member of state examining boards for the medicine degree and family medicine.
- ♦ Member of tribunals for national scientific events. Cuba
- ♦ Medical specialist in Guatemala, 2001-03.
- ♦ Medical specialist in Brazil, 2017-18.

**Dr. Valle Vargas, Mariano**

- Degree in Medicine and Surgery from the University of Havana. Cuba.
- Specialist in Internal Medicine. Héroes del Baire Hospital.
- Master's Degree in Health Biostatistics.
- Diploma in Epidemiology.
- Head of the Internal Medicine Department of the Héroes del Baire Hospital.
- Member of the Cuban Society of Internal Medicine.
- Member of the Cuban Society of Teachers.
- Medical specialist in Venezuela in 2009, 2007-10.
- Professor on the Medicine Degree and Internal Medicine Specialty at the Faculty of Medical Sciences of Isla de la Juventud.
- Professor of the Professional Master's Degree in Infectious Diseases in the Faculty of Medical Sciences in Isla de la Juventud.
- Member of state examining boards for the medicine degree and internal medicine.
- Member of tribunals for national scientific events. Cuba
- Medical Science Teaching Award. Cuba.



**Dr. Tamayo Garrido, Ihosvani**

- ◆ Degree in Medicine and Surgery from the University of Havana. Cuba.
- ◆ Specialist in General Surgery. Héroes del Baire Hospital.
- ◆ Master's degree in emergency medical care.
- ◆ Diploma in Laparoscopic Surgery.
- ◆ Member of the Cuban Society of Surgery.
- ◆ Professor of Medicine and Surgery at the Faculty of Medical Sciences of the Isle of Youth.
- ◆ Member of tribunals for national scientific events. Cuba.
- ◆ Medical Specialist in Honduras in 2012-2016.

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



04

# Structure and Content

The teaching program has been created to provide healthcare professionals with the necessary tools for daily practice in the treatment of infectious diseases. Thus, the content of this **Postgraduate Certificate** comprises the most updated syllabus on the market, which has been developed by leading experts in the field at the international level, with the aim of making specialists more accurate in the diagnosis and treatment of this type of infections.





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*This Postgraduate Certificate in Epidemiology and Microbiology in Infectious Diseases contains the most complete and up-to-date scientific program on the market”*

## Module 1. Epidemiology and microbiology of infectious diseases

- 1.1. Epidemiological, Economic and Social Conditions by Continents that Favour the Development of Infectious Diseases
  - 1.1.1. Africa
  - 1.1.2. America
  - 1.1.3. Europe and Asia
- 1.2. New and Emerging Diseases by Continent
  - 1.2.1. Morbidity and Mortality from Infectious Diseases in Africa
  - 1.2.2. Morbidity and Mortality from Infectious Diseases in the Americas
  - 1.2.3. Infectious Disease Morbidity and Mortality in Asia
  - 1.2.4. Morbidity and Mortality from Infectious Diseases in Europe
- 1.3. The Taxonomy of Infectious Agents
  - 1.3.1. Viruses
  - 1.3.2. Bacteria
  - 1.3.3. Fungi
  - 1.3.4. Parasites
- 1.4. Disease-producing Properties of Micro-organisms
  - 1.4.1. Mechanisms of Pathogenicity
  - 1.4.2. Mechanisms of Adhesion and Multiplication
  - 1.4.3. Mechanisms Enabling the Acquisition of Nutrients from the Host
  - 1.4.4. Mechanisms Inhibiting the Phagocytic Process
  - 1.4.5. Mechanisms for Evading the Immune Response
- 1.5. Microscopy and Staining
  - 1.5.1. Microscopes and Types of Microscopes
  - 1.5.2. Composite Stains
  - 1.5.3. Acid-resistant Micro-organism Staining
  - 1.5.4. Staining to Demonstrate Cellular Structures





- 1.6. Cultures and Growth of Micro-organisms
  - 1.6.1. General Culture Mediums
  - 1.6.2. Specific Culture Methods
- 1.7. Effect of Chemical and Physical Agents on Micro-organisms
  - 1.7.1. Sterilization and Disinfection
  - 1.7.2. Disinfectants and Antiseptics Used in Practice
- 1.8. Molecular Biology and Its Importance for the Infectologist
  - 1.8.1. Bacterial Genetics
  - 1.8.2. Polymerase Chain Reaction Tests
- 1.9. Indication and Interpretation of Microbiological Studies

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





05

# Methodology

This training program provides you with a different way of learning. Our methodology uses a cyclical learning approach: **Relearning**.

This teaching system is used 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 Re-learning, 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

In a given situation, what would you do? Throughout the program you will be presented with multiple simulated clinical cases based on real patients, where you will have to investigate, establish hypotheses and, finally, resolve the situation. There is abundant scientific evidence on the effectiveness of the method. Specialists learn better, faster, and more sustainably over time.

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



According to Dr. Gervas, 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 potential 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 professional medical 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 grasp concepts, but also develop their mental capacity by evaluating real situations and applying their knowledge.
2. The learning process has a clear focus on 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.





## Re-Learning Methodology

At TECH we enhance the Harvard case method with the best 100% online teaching methodology available: Re-learning.

Our 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, which represent a real revolution with respect to simply studying and analyzing cases.



*The physician will learn through real cases and by solving 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 Re-learning method has managed to improve the overall satisfaction levels of professionals who complete their studies, with respect to the quality indicators of the best Spanish-speaking online university (Columbia University).

With this methodology we have trained more than 250,000 physicians with unprecedented success, in all clinical specialties regardless of the surgical load. All this in a highly demanding environment, where the students have a strong socio-economic profile and an average age of 43.5 years.

*Re-learning 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 (we learn, unlearn, forget, and re-learn). Hence, we combine each of these elements concentrically.

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



In this program you will have access to the best educational material, prepared with you 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.

This content is then adapted in an audiovisual format that will create our way of working online, with the latest techniques that allow us to offer you high quality in all of the material that we provide you with.



#### Latest Techniques and Procedures on Video

We introduce you to the latest techniques, to the latest educational advances, to the forefront of current medical techniques. All this, in first person, with the maximum rigor, explained and detailed for your assimilation and understanding. And best of all, you can watch them as many times as you want.



#### Interactive Summaries

We present the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

This unique multimedia content presentation training system was awarded by Microsoft as a "European Success Story".



#### Additional Reading

Recent articles, consensus documents, international guides. in our virtual library you will have access to everything you need to complete your training.





**Expert-Led Case Studies and Case Analysis**

Effective learning ought to be contextual. Therefore, we will present you with real case developments in which the expert will guide you through focusing on and solving the different situations: a clear and direct way to achieve the highest degree of understanding.



**Testing & Re-testing**

We periodically evaluate and re-evaluate your knowledge throughout the program, through assessment and self-assessment activities and exercises: so that you can see how you are achieving your goals.



**Classes**

There is scientific evidence suggesting that observing third-party experts can be useful.

Learning from an expert strengthens knowledge and memory, and generates confidence in our future difficult decisions.



**Quick Action Guides**

We offer you the most relevant contents of the course in the form of worksheets or quick action guides. A synthetic, practical, and effective way to help you progress in your learning.





06

# Certificate

The **Postgraduate Certificate in Epidemiology and Microbiology in Infectious Diseases** guarantees, in addition to the most rigorous and up-to-date education, access to a certificate issued by **TECH Technological University**.



“

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

This **Postgraduate Certificate in Epidemiology and Microbiology in Infectious Diseases** contains the most complete and up-to-date scientific program on the market.

After the student has passed the evaluations, they will receive by certified mail 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.

Title: **Postgraduate Certificate in Epidemiology and Microbiology in Infectious Diseases**

ECTS: **4**

Number of Hours: **100**



\*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 languages  
virtual classroom



## Postgraduate Certificate

Epidemiology and  
Microbiology  
in Infectious Diseases

Course Modality: **Online**

Duration: **6 weeks**

Certificate: **TECH Technological University**

**4 ECTS Credits**

Teaching Hours: **100 hours.**



# Postgraduate Certificate

## Epidemiology and Microbiology in Infectious Diseases

