

# Professional Master's Degree

## Infectious Diseases





## Professional Master's Degree Infectious Diseases

- » Modality: online
- » Duration: 12 months
- » Certificate: TECH Global University
- » Accreditation: 60 ECTS
- » Schedule: at your own pace
- » Exams: online

Website: [www.techtitute.com/us/medicine/professional-master-degree/master-infectious-diseases](http://www.techtitute.com/us/medicine/professional-master-degree/master-infectious-diseases)

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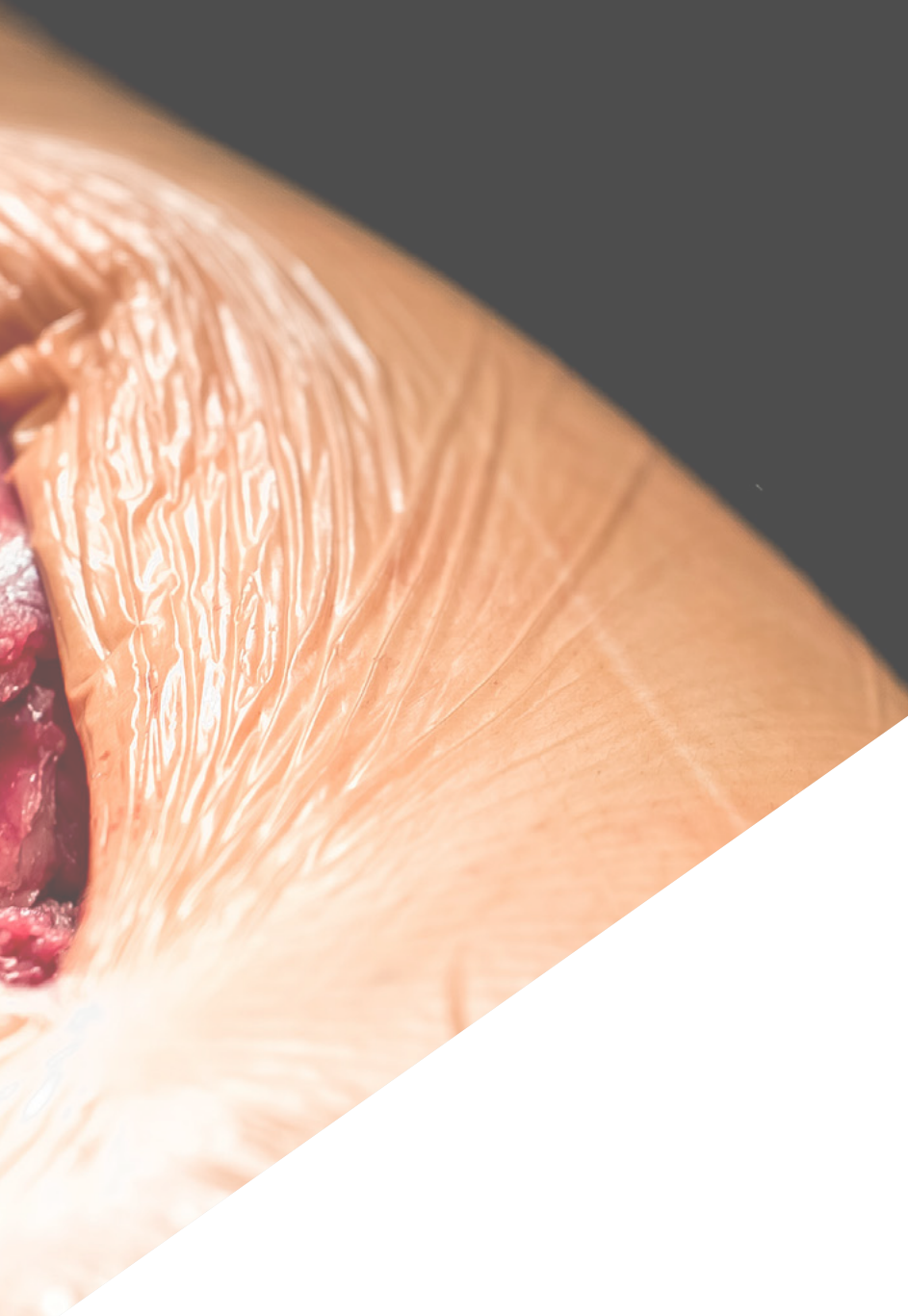
# 01

# Introduction to the Program

Infectious Diseases continue to represent a significant challenge for health systems worldwide due to their considerable impact on morbidity and mortality. In fact, according to a report by the World Health Organization, Lower Respiratory Tract Infections cause approximately 2.6 million deaths annually, highlighting the need for effective strategies for prevention and control. In this regard, TECH offers an academic opportunity designed to provide specialized knowledge in the identification, management, and approach to these pathologies. And all of this through a convenient 100% online methodology!







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*With this 100% online Professional Master's Degree, you will create personalized intervention plans for the comprehensive management of a wide range of Infectious Diseases”*

Infectious diseases continue to present a global challenge due to their ability to spread and adapt. On one hand, factors such as population mobility, climate change, and antimicrobial resistance have favored the reemergence of Eradicated Diseases. On the other hand, the emergence of new public health threats requires constant updates in knowledge regarding epidemiology and transmission mechanisms.

In response to this reality, TECH Global University has created an innovative Professional Master's Degree in Infectious Diseases. The syllabus will cover the epidemiology of infectious diseases from a global perspective, analyzing the economic and social conditions that favor their development across various continents. It will also delve into the taxonomy of infectious agents, including viruses, bacteria, fungi, and parasites. Furthermore, the program will explore microbiological identification techniques using microscopy, staining, and cultures, as well as the effects of chemical and physical agents used for sterilization in various clinical settings. Thanks to this approach, the program will enable professionals to acquire specialized knowledge on the factors influencing the spread of these diseases and the most advanced methodologies for their control.

Moreover, the university degree is based on a flexible 100% online format with free access to educational content. Therefore, graduates will only need an electronic device with internet access to enter the Virtual Campus. Additionally, TECH employs its disruptive Relearning methodology, based on the progressive reiteration of key concepts to facilitate knowledge assimilation without the need for traditional memorization.

Furthermore, a renowned International Guest Director will offer 10 comprehensive Masterclasses.

This **Professional Master's Degree in Infectious Diseases** contains the most complete and up-to-date scientific program on the market. The most important features include:

- ♦ The development of practical cases presented by experts in Infectious Diseases
- ♦ The graphic, schematic, and practical contents with which they are created, provide scientific and practical information on the disciplines that are essential for professional practice
- ♦ Practical exercises where self-assessment can be used to improve learning
- ♦ Its special emphasis on innovative 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



*A prestigious International Guest Director will deliver 10 intensive Masterclasses on the most innovative therapeutic methods for managing Infectious Diseases”*

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*You will deepen your understanding of the pathophysiology, diagnosis, and treatment of the main Infectious Diseases on a global scale”*

The faculty includes professionals from the medical field who share the experience of their work in this 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 an immersive learning experience designed to prepare for real-life situations.

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

*You will master the early identification of infections caused by viruses, bacteria, fungi, and parasites.*

*A syllabus tailored to your needs and designed under the most effective teaching methodology: Relearning.*





02

# Why Study at TECH?

TECH is the world's largest online university. With an impressive catalog of more than 14,000 university programs available in 11 languages, it is positioned as a leader in employability, with a 99% job placement rate. In addition, it relies on an enormous faculty of more than 6,000 professors of the highest international renown.



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*Study at the world's largest online university  
and guarantee your professional success.  
The future starts at TECH”*

**The world's best online university, according to FORBES**

The prestigious Forbes magazine, specialized in business and finance, has highlighted TECH as "the best online university in the world" This is what they have recently stated in an article in their digital edition in which they echo the success story of this institution, "thanks to the academic offer it provides, the selection of its teaching staff, and an innovative learning method oriented to form the professionals of the future".

**Forbes**

The best online university in the world

The most complete syllabus

**The most complete syllabuses on the university scene**

TECH offers the most complete syllabuses on the university scene, with programs that cover fundamental concepts and, at the same time, the main scientific advances in their specific scientific areas. In addition, these programs are continuously updated to guarantee students the academic vanguard and the most demanded professional skills. and the most in-demand professional competencies. In this way, the university's qualifications provide its graduates with a significant advantage to propel their careers to success.

**The best top international faculty**

TECH's faculty is made up of more than 6,000 professors of the highest international prestige. Professors, researchers and top executives of multinational companies, including Isaiah Covington, performance coach of the Boston Celtics; Magda Romanska, principal investigator at Harvard MetaLAB; Ignacio Wistumba, chairman of the department of translational molecular pathology at MD Anderson Cancer Center; and D.W. Pine, creative director of TIME magazine, among others.

**TOP**  
international faculty

The most effective methodology

**A unique learning method**

TECH is the first university to use Relearning in all its programs. This is the best online learning methodology, accredited with international teaching quality certifications, provided by prestigious educational agencies. In addition, this innovative academic model is complemented by the "Case Method", thereby configuring a unique online teaching strategy. Innovative teaching resources are also implemented, including detailed videos, infographics and interactive summaries.

**The world's largest online university**

TECH is the world's largest online university. We are the largest educational institution, with the best and widest digital educational catalog, one hundred percent online and covering most areas of knowledge. We offer the largest selection of our own degrees and accredited online undergraduate and postgraduate degrees. In total, more than 14,000 university programs, in ten different languages, making us the largest educational institution in the world.

**World's No.1**  
The World's largest online university



**The official online university of the NBA**

TECH is the official online university of the NBA. Thanks to our agreement with the biggest league in basketball, we offer our students exclusive university programs, as well as a wide variety of educational resources focused on the business of the league and other areas of the sports industry. Each program is made up of a uniquely designed syllabus and features exceptional guest hosts: professionals with a distinguished sports background who will offer their expertise on the most relevant topics.

**Leaders in employability**

TECH has become the leading university in employability. Ninety-nine percent of its students obtain jobs in the academic field they have studied within one year of completing any of the university's programs. A similar number achieve immediate career enhancement. All this thanks to a study methodology that bases its effectiveness on the acquisition of practical skills, which are absolutely necessary for professional development.



**Google Premier Partner**

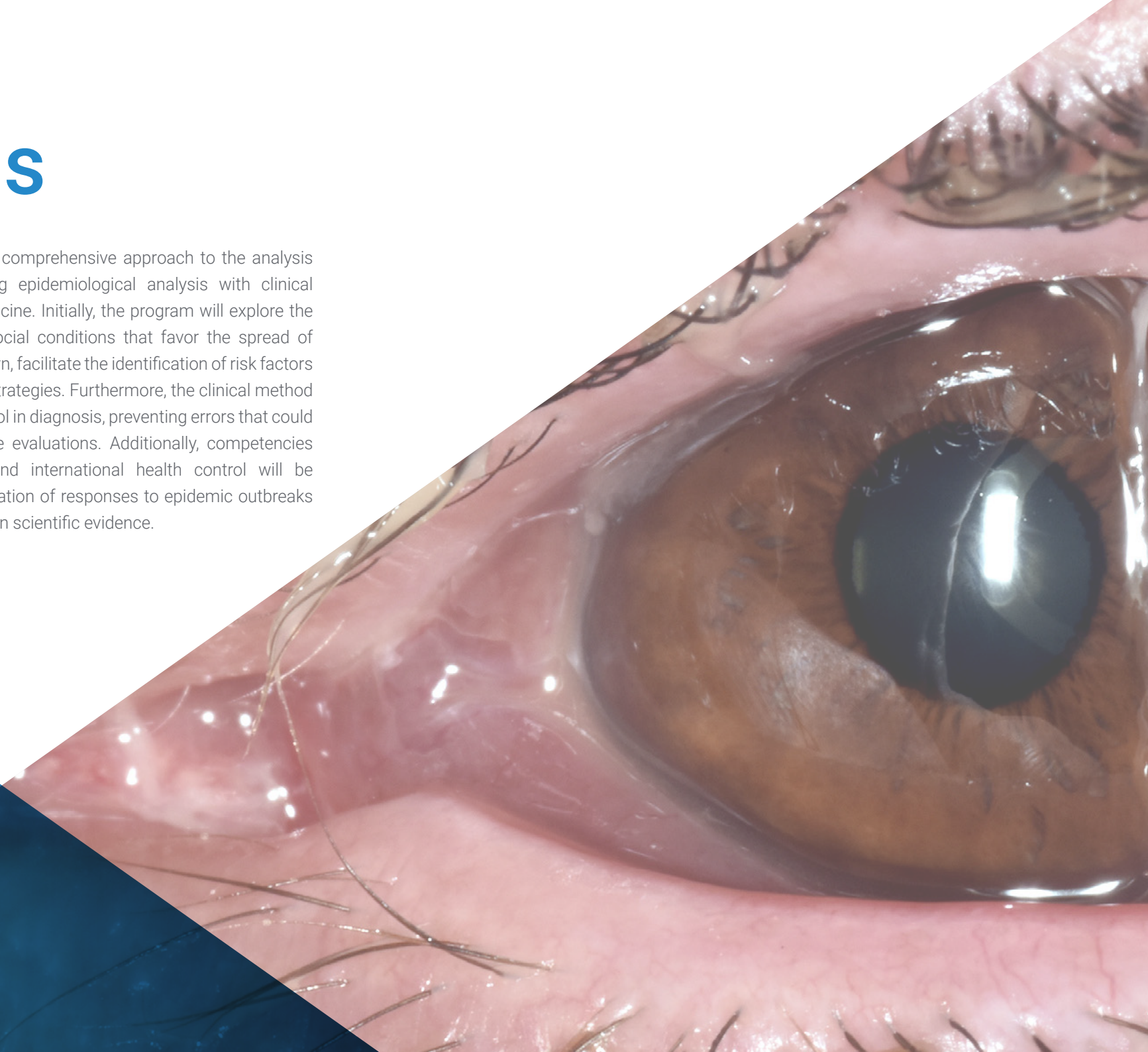
The American technology giant has awarded TECH the Google Premier Partner badge. This award, which is only available to 3% of the world's companies, highlights the efficient, flexible and tailored experience that this university provides to students. The recognition not only accredits the maximum rigor, performance and investment in TECH's digital infrastructures, but also places this university as one of the world's leading technology companies.

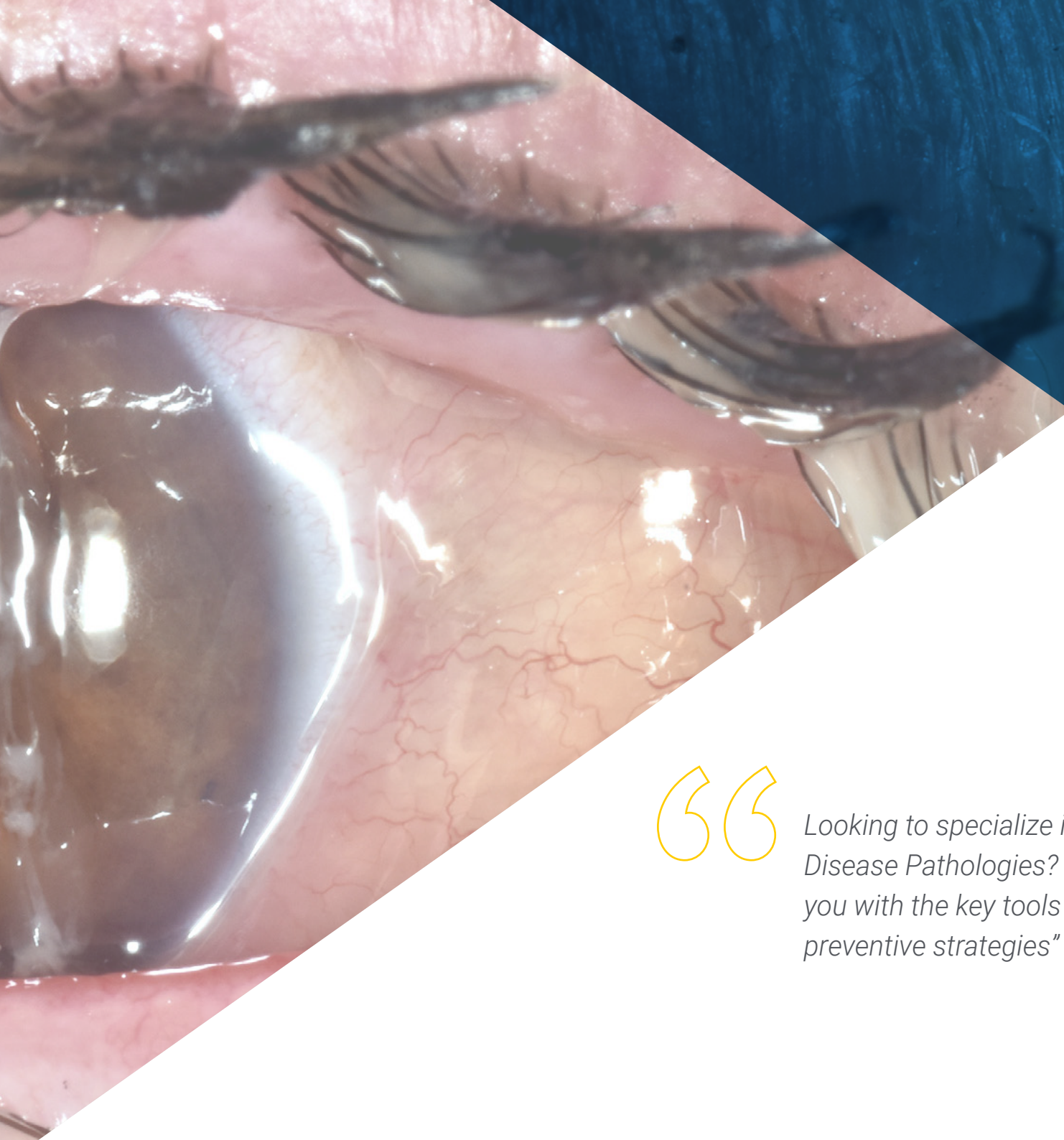
**The top-rated university by its students**

Students have positioned TECH as the world's top-rated university on the main review websites, with a highest rating of 4.9 out of 5, obtained from more than 1,000 reviews. These results consolidate TECH as the benchmark university institution at an international level, reflecting the excellence and positive impact of its educational model.

# 03 Syllabus

This academic path will provide a comprehensive approach to the analysis of Infectious Diseases, combining epidemiological analysis with clinical methods and evidence-based medicine. Initially, the program will explore the epidemiological, economic, and social conditions that favor the spread of infectious diseases, which will, in turn, facilitate the identification of risk factors and the formulation of preventive strategies. Furthermore, the clinical method will be addressed as an essential tool in diagnosis, preventing errors that could compromise the accuracy of case evaluations. Additionally, competencies in epidemiological surveillance and international health control will be strengthened, enabling the optimization of responses to epidemic outbreaks and ensuring decisions are based on scientific evidence.





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*Looking to specialize in the control of Infectious Disease Pathologies? This syllabus will provide you with the key tools to develop highly effective preventive strategies”*



## Module 1. Epidemiology of Infectious Diseases

- 1.1. Epidemiological, Economic, and Social Conditions by Continent that Favor 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 America
  - 1.2.3. Morbidity and Mortality from Infectious Diseases in Asia
  - 1.2.4. Morbidity and Mortality from Infectious Diseases in Europe
- 1.3. Taxonomy of Infectious Agents
  - 1.3.1. Viruses
  - 1.3.2. Bacteria
  - 1.3.3. Fungi
  - 1.3.4. Parasites
- 1.4. Properties of Microorganisms to Cause Disease
  - 1.4.1. Pathogenicity Mechanisms
  - 1.4.2. Adhesion and Multiplication Mechanisms
  - 1.4.3. Mechanisms that Allow Nutrient Acquisition from the Host
  - 1.4.4. Mechanisms that Inhibit the Phagocytic Process
  - 1.4.5. Immune Evasion Mechanisms
- 1.5. Microscopy and Staining
  - 1.5.1. Microscopes and Types of Microscopes
  - 1.5.2. Compound Stains
  - 1.5.3. Staining of Acid-Fast Microorganisms
  - 1.5.4. Stains to Demonstrate Cellular Structures



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

## Module 2. Clinical Research in Infectious Diseases

- 2.1. The Clinical Method in the Diagnosis of Infectious Diseases
  - 2.1.1. Fundamental Concepts of the Clinical Method: Stages, Principles
  - 2.1.2. The Clinical Method and Its Utility in Infectious Disease
  - 2.1.3. Most Common Errors in Applying the Clinical Method
- 2.2. Epidemiology in the Study of Infectious Diseases
  - 2.2.1. Epidemiology as a Science
  - 2.2.2. The Epidemiological Method
  - 2.2.3. Epidemiological Tools Applied to the Study of Infectious Diseases
- 2.3. Clinical Epidemiology and Evidence-Based Medicine
  - 2.3.1. Scientific Evidence and Clinical Experience
  - 2.3.2. The Importance of Evidence-Based Medicine: Diagnosis and Treatment
  - 2.3.3. Clinical Epidemiology as a Powerful Tool in Medical Thinking
- 2.4. Behavior of Infectious Diseases in the Population
  - 2.4.1. Endemic
  - 2.4.2. Epidemic
  - 2.4.3. Pandemic
- 2.5. Addressing Epidemic Outbreaks
  - 2.5.1. Diagnosis of Epidemic Outbreaks
  - 2.5.2. Measures for Controlling Epidemic Outbreaks
- 2.6. Epidemiological Surveillance
  - 2.6.1. Types of Epidemiological Surveillance
  - 2.6.2. Design of Epidemiological Surveillance Systems
  - 2.6.3. Utility and Importance of Epidemiological Surveillance
- 2.7. International Health Control
  - 2.7.1. Components of International Health Control
  - 2.7.2. Diseases Subject to International Health Control
  - 2.7.3. Importance of International Health Control
- 2.8. Mandatory Reporting Systems for Infectious Diseases
  - 2.8.1. Characteristics of Diseases Subject to Mandatory Reporting
  - 2.8.2. The Role of the Physician in Mandatory Reporting Systems for Infectious Diseases
- 2.9. Vaccination
  - 2.9.1. Immunological Basis of Vaccination
  - 2.9.2. Vaccine Development and Production
  - 2.9.3. Diseases Preventable by Vaccines
  - 2.9.4. Experiences and Results of the Vaccination System in Cuba
- 2.10. Research Methodology in Health
  - 2.10.1. The Importance of Research Methodology for Public Health as a Science
  - 2.10.2. Scientific Thinking in Health
  - 2.10.3. The Scientific Method
  - 2.10.4. Stages of Scientific Research
- 2.11. Information Management and Use of New Information and Communication Technologies
  - 2.11.1. Use of New Information and Communication Technologies in Knowledge Management for Health Professionals in Clinical, Teaching, and Research Work
  - 2.11.2. Information Literacy

- 2.12. Design of Research Studies for Infectious Diseases
  - 2.12.1. Types of Studies in Health and Medical Sciences
  - 2.12.2. Design of Research Applied to Infectious Diseases
- 2.13. Descriptive and Inferential Statistics
  - 2.13.1. Summary Measures for Various Variables in Scientific Research
  - 2.13.2. Measures of Central Tendency: Mean, Mode, and Median
  - 2.13.3. Dispersion Measures: Variants and Standard Deviation
  - 2.13.4. Statistical Estimation
  - 2.13.5. Population and Sample
  - 2.13.6. Tools for Inferential Statistics
- 2.14. Design and Use of Databases
  - 2.14.1. Types of Databases
  - 2.14.2. Programs and Statistical Packages for Database Management
- 2.15. Scientific Research Protocol
  - 2.15.1. Components of a Scientific Research Protocol
  - 2.15.2. Utility of a Scientific Research Protocol
- 2.16. Clinical Trials and Meta-Analysis
  - 2.16.1. Types of Clinical Trials
  - 2.16.2. The Role of Clinical Trials in Health Research
  - 2.16.3. Meta-Analysis: Conceptual Definitions and Methodological Design
  - 2.16.4. Applicability of Meta-Analysis and Its Role in Medical Sciences
- 2.17. Critical Reading of Scientific Research
  - 2.17.1. Medical Journals and Their Role in Disseminating Scientific Information
  - 2.17.2. The Most Impactful Medical Journals in Infectious Disease Worldwide
  - 2.17.3. Methodological Tools for Critical Reading of Scientific Literature
- 2.18. Publication of Scientific Research Results
  - 2.18.1. The Scientific Article
  - 2.18.2. Types of Scientific Articles
  - 2.18.3. Methodological Requirements for Publishing Scientific Research Results
  - 2.18.4. The Process of Scientific Publication in Medical Journals

### Module 3. Challenges in the Diagnostic Process of Infectious Diseases

- 3.1. Diagnosis of Bacteremia, Catheter-Related Infections, and Soft Tissue Infections
- 3.2. Bacteriological Diagnosis of Bacteremia. Genitourinary Infections
- 3.3. Concepts and Application of In Vitro Antibiotic Sensitivity Tests. Detection of Resistance Mechanisms
- 3.4. Microbiological Diagnosis of Mycobacteria
- 3.5. Mycological Diagnosis and In Vitro Sensitivity Testing
- 3.6. Virological Diagnosis
- 3.7. Parasitological Diagnosis
- 3.8. Procedures in Clinical Practice
  - 3.8.1. Sample Collection: Blood Cultures, Respiratory Samples, Urine, Genital Exudates, Swabs, Surgical Samples and Biopsies, Stool Cultures, etc.
  - 3.8.2. Interpretation of Results: Microbiological Identification (Colonization, Infection, Contamination), Sensitivity Testing, and Serology

### Module 4. Advances in Antibiotic Therapy

- 4.1. Basic Principles in the Selection and Use of Antimicrobials
- 4.2. Basics of Resistance and Its Clinical Implications
- 4.3. Clinical Application of PK/PD Parameters
- 4.4. Use of Antimicrobials in Special Host Situations

### Module 5. Rational Use of Antibiotics

- 5.1. Beta-Lactams I: Penicillins, Aminopenicillins and Beta-Lactamase Inhibitors
- 5.2. Beta-Lactams II: Cephalosporins, Monobactams and Carbapenems
- 5.3. Aminoglycosides, Tetracyclines, Lincosamides, Rifamycins, and Antifolates
- 5.4. Quinolones and Macrolides
- 5.5. Glycopeptides. New Antibiotics for Gram-positive Infections (Lipopeptides and Oxazolidinones)
- 5.6. Antifungal Agents
- 5.7. Antiviral Agents (Excluding Antiretrovirals and Direct-acting Antivirals for HCV)
- 5.8. Antimicrobial Combinations. Pros and Cons



**Module 6. Infectious Diseases of International Travelers**

- 6.1. Vaccination for International Travelers
  - 6.1.1. Main Vaccines for International Travelers
  - 6.1.2. Vaccination Against Yellow Fever
- 6.2. Prophylaxis for Travellers to Tropical Areas
  - 6.2.1. Pharmacological Treatment Based on the Geographic Area to be Visited
  - 6.2.2. Glucose-6-Phosphate Dehydrogenase Deficiency and Antimalarial Drugs
  - 6.2.3. Traveler Prevention Measures in Tropical Areas
- 6.3. Traveller's Diarrhea
  - 6.3.1. Epidemiology
  - 6.3.2. Etiology
  - 6.3.3. Clinical Manifestations
  - 6.3.4. Diagnosis
  - 6.3.5. Treatment
- 6.4. Health Control for International Travelers
- 6.5. Fever After International Travell
  - 6.5.1. Main Etiologies
  - 6.5.2. Diagnostic Approach
  - 6.5.3. Imported Infectious Pathology in International Travelers

**Module 7. Nosocomial Infections**

- 7.1. Infections Associated with Medical Procedures
  - 7.1.1. Surgical Wound Infection: Superficial and Deep
  - 7.1.2. Nosocomial Pneumonia Associated with Mechanical Ventilation
  - 7.1.3. Infections Associated with Non-Tunneled Peripheral and Central Venous Catheters
  - 7.1.4. Infections Associated with Urinary Catheter
  - 7.1.5. Clostridium Difficile Infection
  - 7.1.6. Overview of Infection in Critically Ill Patients Admitted to the ICU

**Module 8. Assessment and Treatment of Community-Acquired Infections**

- 8.1. Assessment of Severity in Infectious Diseases
- 8.2. The Role of Biomarkers in Clinical Diagnosis of Infection
- 8.3. Basic Principles for Clinicians in the Assessment and Choice of Empirical Antibiotic Treatment
- 8.4. Severe Sepsis and Septic Shock: Sepsis Code
- 8.5. Osteoarticular Infections
- 8.6. Central Nervous System Infections
- 8.7. Bacterial Endocarditis

**Module 9. Urinary Tract, Skin, and Soft Tissue Infections**

- 9.1. Genital Tract Infections and STDs I
- 9.2. Genital Tract Infections and STDs II
- 9.3. Genital Infections in Women
- 9.4. Urinary Tract Infections
- 9.5. Viral Skin Infections
- 9.6. Fungal and Mycobacterial Skin Infections
- 9.7. Bacterial Skin and Soft Tissue Infections
- 9.8. Intra-abdominal and Enteric Infections

**Module 10. Zoonotic and Bacterial Infections**

- 10.1. Tuberculosis
- 10.2. Community-Acquired Pneumonia (CAP)
- 10.3. Zoonoses (Brucella, Rickettsia, Bartonella, Leptospira, Lyme, Leishmania, Arbovirus, etc.)
- 10.4. Intermediate Febrile Syndrome
- 10.5. Mononucleosis Syndrome
- 10.6. Fever and Exanthema
- 10.7. Fever and Lymphadenopathies in Immunocompetent Patients
- 10.8. Fever of Unknown Origin (FUO) in the 21st Century

## Module 11. Hepatitis, HIV/AIDS Coinfection, and Tuberculosis

- 11.1. Viral Hepatitis A
  - 11.1.1. Virus Characteristics and Replication Cycle
  - 11.1.2. Clinical Picture
  - 11.1.3. Viral Markers
  - 11.1.4. Evolution and Prognosis
  - 11.1.5. Treatment
- 11.2. Viral Hepatitis B and C
  - 11.2.1. Virus Characteristics and Replication Cycle
  - 11.2.2. Clinical Picture
  - 11.2.3. Viral Markers
  - 11.2.4. Evolution and Prognosis
  - 11.2.5. Treatment
- 11.3. Viral Hepatitis D and E
  - 11.3.1. Virus Characteristics and Replication Cycle
  - 11.3.2. Clinical Picture
  - 11.3.3. Viral Markers
  - 11.3.4. Evolution and Prognosis
  - 11.3.5. Treatment
- 11.4. Epidemiology of Morbidity and Mortality from Tuberculosis and HIV/AIDS Coinfection
  - 11.4.1. Incidence
  - 11.4.2. Prevalence
  - 11.4.3. Mortality
- 11.5. Pathobiology of Tuberculosis and HIV/AIDS Coinfection
  - 11.5.1. Pathophysiological Alterations in Coinfection
  - 11.5.2. Pathological Alterations
- 11.6. Clinical Manifestations of Coinfection
  - 11.6.1. Clinical Manifestations of Pulmonary Tuberculosis
  - 11.6.2. Clinical Manifestations of Extrapulmonary Tuberculosis
- 11.7. Diagnosis of Tuberculosis in Patients Living with HIV/AIDS
  - 11.7.1. Diagnostic Studies for Pulmonary Tuberculosis in HIV/AIDS Patients

- 11.8. Comprehensive Care for Patients with Tuberculosis and HIV/AIDS Coinfection and Therapeutic Considerations
  - 11.8.1. Comprehensive Care System for TB/HIV/AIDS Patients
  - 11.8.2. Considerations in Antituberculosis Treatment for Patients with Tuberculosis and HIV/AIDS Coinfection
  - 11.8.3. Considerations in Antiretroviral Treatment for Patients with Tuberculosis and HIV/AIDS Coinfection
  - 11.8.4. The Issue of Resistance to Antitubercular and Antiretroviral Drugs in These Patients

## Module 12. Parasitic and Tropical Diseases

- 12.1. Introduction to Parasitology
  - 12.1.1. General Concepts Used in Parasitology
  - 12.1.2. Epidemiology of Major Parasitic Diseases and Tropical Diseases
  - 12.1.3. Classification of Parasites
  - 12.1.4. Tropical Diseases and Febrile Syndrome in the Tropics
- 12.2. Malaria
  - 12.2.1. Epidemiology
  - 12.2.2. Etiological Agent
  - 12.2.3. Pathogenesis
  - 12.2.4. Clinical Picture
  - 12.2.5. Complications
  - 12.2.6. Diagnosis
  - 12.2.7. Treatment
- 12.3. Intestinal Protozoan Infections
  - 12.3.1. Main Intestinal Protozoa
  - 12.3.2. Diagnosis of Intestinal Protozoa
  - 12.3.3. Amebiasis and Giardiasis
- 12.4. Filarial Diseases
  - 12.4.1. Epidemiology and Global Situation
  - 12.4.2. Clinical Syndromes
  - 12.4.3. Main Filarial Diseases: Main Filariae: Wuchereria Bancrofti, Brugia Malayi, Brugia Timori, Onchocerca Volvulus, Loa Loa, Mansonella Perstans, Mansonella Streptocerca, and Mansonella Ozzardi

- 12.5. Leishmaniasis
  - 12.5.1. Cutaneous Leishmaniasis
  - 12.5.2. Visceral Leishmaniasis
- 12.6. Trypanosomiasis
  - 12.6.1. African Trypanosomiasis
  - 12.6.2. American Trypanosomiasis
- 12.7. Schistosomiasis
  - 12.7.1. Schistosomiasis Haematobium
  - 12.7.2. Schistosomiasis Mansoni
  - 12.7.3. Schistosomiasis Japonicum
  - 12.7.4. Schistosomiasis Intercalatum
- 12.8. Intestinal Parasitism
  - 12.8.1. Epidemiology
  - 12.8.2. Ascariasis
  - 12.8.3. Enterobiasis
  - 12.8.4. Hookworm Infection and Necatoriasis
  - 12.8.5. Trichuriasis
- 12.9. Tapeworm Infections
  - 12.9.1. Intestinal Tapeworms
  - 12.9.2. Tissue Tapeworms
- 12.10. Antiparasitic Agents
  - 12.10.1. General Concepts
  - 12.10.2. Main Definitions Used in the Management of Antiparasitics
  - 12.10.3. Classifications Based on Chemical Structure, Mechanism of Action, or Antiparasitic Action
  - 12.10.4. Mechanisms of Action
- 12.11. Antiprotozoals
  - 12.11.1. Classification
  - 12.11.2. Mechanisms of Action
  - 12.11.3. Antiparasitic Spectrum
  - 12.11.4. Pharmacokinetics and Pharmacodynamics
  - 12.11.5. Dosage and Presentation

- 12.12. Antiparasitic for Helminths
  - 12.12.1. Classification
  - 12.12.2. Mechanisms of Action
  - 12.12.3. Antiparasitic Spectrum
  - 12.12.4. Pharmacokinetics and Pharmacodynamics
  - 12.12.5. Dosage and Presentation

### Module 13. Antimicrobial Resistance

- 13.1. Epidemiology. From Molecular to Socioeconomic
  - 13.1.1. Analysis of the Molecular, Genetic, Clinical, Epidemiological, and Socioeconomic Evolution of Antibiotic Resistance
  - 13.1.2. Mortality from Superbugs
  - 13.1.3. Most Lethal Superbugs
- 13.2. Mechanisms of Antimicrobial Resistance
  - 13.2.1. Genetic Mechanisms
  - 13.2.2. Acquired Mechanisms
- 13.3. MRSA and GISA
  - 13.3.1. Epidemiology
  - 13.3.2. Resistance Mechanisms
  - 13.3.3. Therapeutic Alternatives
- 13.4. Resistant Enterobacteria
  - 13.4.1. Epidemiology
  - 13.4.2. Resistance Mechanisms
  - 13.4.3. Therapeutic Alternatives
- 13.5. Resistant Pneumococcus
  - 13.5.1. Epidemiology
  - 13.5.2. Resistance Mechanisms
  - 13.5.3. Therapeutic Alternatives
- 13.6. Viral Resistance
  - 13.6.1. Epidemiology
  - 13.6.2. Resistance Mechanisms
  - 13.6.3. Therapeutic Alternatives



- 13.7. Fungal and Parasitic Resistance
  - 13.7.1. Epidemiology
  - 13.7.2. Resistance Mechanisms
  - 13.7.3. Therapeutic Alternatives
- 13.8. Global Program for the Control of Antimicrobial Resistance and the Research of New Antibiotics
  - 13.8.1. Objectives and Actions of the Global Program for the Control of Antimicrobial Resistance
  - 13.8.2. Research on New Antibiotics for Multidrug-resistant Germs
  - 13.8.3. Emergence of Other Therapeutic Modalities for Infection Control

#### Module 14. ICT and the Medical History in Infectious Diseases

- 14.1. Clinical Decision Support Systems
- 14.2. Information Systems and Antimicrobial Optimization Programs
- 14.3. Record and Surveillance Systems

#### Module 15. Coronavirus Infections

- 15.1. Discovery and Evolution of Coronaviruses
  - 15.1.1. Discovery of Coronaviruses
  - 15.1.2. Global Trends in Coronavirus Infections
- 15.2. Main Microbiological Characteristics and Members of the Coronavirus Family
  - 15.2.1. General Microbiological Characteristics of Coronaviruses
  - 15.2.2. Viral Genome
  - 15.2.3. Principal Virulence Factors
- 15.3. Epidemiological Changes in Coronavirus Infections from Its Discovery to the Present
  - 15.3.1. Morbidity and Mortality of Coronavirus Infections from their Emergence to the Present
- 15.4. The Immune System and Coronavirus Infections
  - 15.4.1. Immunological Mechanisms Involved in the Immune Response to Coronaviruses
  - 15.4.2. Cytokine Storm in Coronavirus Infections and Immunopathology
  - 15.4.3. Modulation of the Immune System in Coronavirus Infections



- 15.5. Pathogenesis and Pathophysiology of Coronavirus Infections
  - 15.5.1. Pathophysiological and Pathogenic Alterations in Coronavirus Infections
  - 15.5.2. Clinical Implications of the Main Pathophysiological Alterations
- 15.6. Risk Groups and Transmission Mechanisms of Coronaviruses
  - 15.6.1. Main Sociodemographic and Epidemiological Characteristics of Risk Groups Affected by Coronavirus
  - 15.6.2. Coronavirus Mechanisms of Transmission
- 15.7. Natural History of Coronavirus Infections
  - 15.7.1. Stages of Coronavirus Infection
- 15.8. Updated Microbiological Diagnosis of Coronavirus Infections
  - 15.8.1. Sample Collection and Shipment
  - 15.8.2. PCR and Sequencing
  - 15.8.3. Serology Testing
  - 15.8.4. Virus Isolation
- 15.9. Current Biosafety Measures in Microbiology Laboratories for Coronavirus Sample Handling
  - 15.9.1. Biosafety Measures for Coronavirus Sample Handling
- 15.10. Up-to-Date Management of Coronavirus Infections
  - 15.10.1. Prevention Measures
  - 15.10.2. Symptomatic Treatment
  - 15.10.3. Antiviral and Antimicrobial Treatment in Coronavirus Infections
  - 15.10.4. Treatment of Severe Clinical Forms
- 15.11. Future Challenges in Prevention, Diagnosis, and Therapy of Coronavirus Infections
  - 15.11.1. Global Challenges for the Development of Prevention, Diagnostic, and Treatment Strategies for Coronavirus Infections



# 04

# Teaching Objectives

This university program primarily focuses on enhancing professional competencies in the management of infectious agents, allowing for more accurate decision-making based on scientific evidence. Through the analysis of epidemiology, the clinical method, and sanitary control, the necessary skills to diagnose more accurately and develop prevention and response strategies for epidemic outbreaks will be strengthened. Additionally, the capacity to analyze epidemiological data and manage health emergencies will be perfected, fostering more efficient and rigorous performance in clinical environments.







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*You will develop advanced clinical competencies for the correct interpretation of microbiological, serological, and molecular tests in the clinical context”*



## General Objectives

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- ♦ Understand the fundamental principles of the epidemiology of infectious diseases to analyze their impact on public health and design control strategies
- ♦ Develop clinical research skills applied to infectious diseases, enabling the critical interpretation of studies and evidence-based decision-making
- ♦ Optimize the diagnostic process of infectious diseases by identifying challenges and implementing appropriate clinical and laboratory approaches
- ♦ Apply the rational use of antibiotics to improve therapeutic effectiveness and reduce antimicrobial resistance in various clinical settings
- ♦ Identify the characteristics, diagnosis, and treatment of infectious diseases associated with international travel, addressing risks and preventive measures
- ♦ Analyze nosocomial infections to establish prevention and control strategies in different healthcare settings
- ♦ Differentiate the clinical manifestations, therapeutic approaches, and prevention strategies for urinary, skin, soft tissue, zoonotic, and bacterial infections
- ♦ Explore the co-infection of HIV/AIDS, hepatitis, and tuberculosis to improve clinical management and therapeutic responses in affected patients
- ♦ Incorporate the use of information and communication technologies in managing medical records and monitoring patients with infectious diseases





## Specific Objectives

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### Module 1. Epidemiology of Infectious Diseases

- ♦ Analyze the epidemiological, economic, and social conditions that favor the proliferation of infectious diseases across different continents
- ♦ Study the morbidity and mortality caused by infectious diseases in Africa, America, Europe, and Asia, and their implications for public health
- ♦ Describe the taxonomy of infectious agents, including viruses, bacteria, fungi, and parasites, and their distinctive characteristics
- ♦ Investigate the pathogenicity mechanisms, adhesion, multiplication, and immune evasion of pathogenic microorganisms
- ♦ Explore microscopy and staining techniques, focusing on staining methods that allow observation of cellular structures and acid-resistant microorganisms
- ♦ Apply principles of molecular biology and bacterial genetics in diagnosing and treating infections, using tests such as polymerase chain reaction

### Module 2. Clinical Research in Infectious Diseases

- ♦ Apply the clinical method in the diagnosis of infectious diseases, identifying the most common errors in its application
- ♦ Explore the role of epidemiology in studying infectious diseases, using appropriate epidemiological tools and methods
- ♦ Develop strategies based on clinical medicine and epidemiology for diagnosing and treating infectious diseases
- ♦ Establish the foundations of international health control and its impact on the management of infectious diseases globally
- ♦ Design research studies in infectious diseases, including the application of statistical methodologies and databases
- ♦ Encourage the use of new technologies and computer tools in managing knowledge and improving clinical, teaching, and research work in healthcare

### Module 3. Challenges in the Diagnostic Process of Infectious Diseases

- ♦ Apply advanced diagnostic methods to detect bacteremia, catheter-related infections, and soft tissue infections using the appropriate bacteriological tests
- ♦ Use in vitro antibiotic sensitivity tests to identify resistance mechanisms in genitourinary infections and other bacteremias
- ♦ Perform microbiological diagnosis of mycobacteria, correctly interpreting results to ensure effective treatment
- ♦ Carry out sample collection and microbiological analysis procedures in clinical practice, ensuring the proper interpretation of results such as microbiological identification, sensitivity tests, and serology

### Module 4. Advances in Antibiotic Therapy

- ♦ Understand the basic principles in the selection and use of antimicrobials, focusing on optimizing their efficacy and safety
- ♦ Investigate antimicrobial resistance and its clinical implications, applying pharmacokinetic and pharmacodynamic parameters in special host situations

### Module 5. Responsible Antibiotic Use

- ♦ Analyze the use of beta-lactam antibiotics, including penicillins and cephalosporins, in the treatment of bacterial infections
- ♦ Evaluate the efficacy and safety of aminoglycosides, tetracyclines, and rifamycins in specific infections
- ♦ Apply appropriate criteria for selecting antifungal and antiviral agents in managing infections
- ♦ Investigate the benefits and risks of antimicrobial combinations in the treatment of complex infections



### **Module 6. Infectious Diseases of International Travelers**

- ♦ Evaluate the effectiveness of vaccines recommended for international travelers based on their destination
- ♦ Apply pharmacological prophylaxis strategies for travelers to tropical areas, considering geographic characteristics
- ♦ Develop an appropriate diagnostic approach for fever in international travelers and its main etiologies
- ♦ Examine imported infectious diseases and their clinical management in international travelers

### **Module 7. Nosocomial Infections**

- ♦ Evaluate the risk and management of surgical wound infections, both superficial and deep
- ♦ Develop prevention and treatment strategies for nosocomial pneumonia associated with mechanical ventilation

### **Module 8. Assessment and Treatment of Community-Acquired Infections**

- ♦ Establish criteria to assess the severity of infectious diseases and the urgency of treatment
- ♦ Analyze the use of biomarkers in the clinical diagnosis of infections
- ♦ Determine the basic principles for the choice and indication of empirical antibiotic treatments for community-acquired infections
- ♦ Address the management of severe sepsis and septic shock, implementing the Sepsis Code in clinical care

### **Module 9. Urinary Tract, Skin, and Soft Tissue Infections**

- ♦ Analyze the main genital tract infections and their treatment, focusing on sexually transmitted infections (STIs)
- ♦ Examine the characteristics and management of common and complex urinary tract infections
- ♦ Establish diagnostic and treatment criteria for bacterial skin and soft tissue infections
- ♦ Address viral, fungal, and mycobacterial infections of the skin and their therapeutic approaches

### **Module 10. Zoonotic and Bacterial Infections**

- ♦ Establish differential diagnosis and treatment of tuberculosis, addressing its clinical impact
- ♦ Analyze the characteristics, diagnosis, and treatment of community-acquired pneumonia
- ♦ Evaluate major zoonotic diseases and their clinical implications, focusing on prevention and management
- ♦ Examine intermediate febrile syndromes and mononucleosis, including their differential diagnosis

### **Module 11. Hepatitis, HIV/AIDS Coinfection, and Tuberculosis**

- ♦ Identify the characteristics, clinical presentation, and treatment of viral hepatitis A
- ♦ Analyze the clinical aspects and therapeutic approaches for viral hepatitis B and C
- ♦ Evaluate the characteristics and treatment of viral hepatitis D and E
- ♦ Study the epidemiology of tuberculosis and HIV/AIDS coinfection, including incidence and mortality
- ♦ Explore the pathophysiological and pathological alterations in tuberculosis and HIV/AIDS coinfection

**Module 12. Parasitic and Tropical Diseases**

- ♦ Understand the general concepts and epidemiology of major parasitic diseases and tropical diseases
- ♦ Analyze the characteristics, diagnosis, and treatment of malaria, focusing on its pathogenesis and complications
- ♦ Study diseases caused by intestinal protozoa, with emphasis on amebiasis and giardiasis
- ♦ Examine different forms of schistosomiasis and their diagnosis, with emphasis on the most prevalent species

**Module 13. Antimicrobial Resistance**

- ♦ Analyze the molecular, genetic, and epidemiological evolution of antibiotic resistance, considering its socioeconomic impact
- ♦ Evaluate the genetic and acquired mechanisms responsible for antimicrobial resistance
- ♦ Address the epidemiology, resistance mechanisms, and therapeutic alternatives for infections caused by resistant enterobacteria
- ♦ Explore viral resistance mechanisms and therapeutic alternatives for managing resistant viral infections

**Module 14. ICT and the Medical History in Infectious Diseases**

- ♦ Explore clinical decision support systems and their impact on the management of infectious diseases
- ♦ Evaluate record-keeping and surveillance systems to optimize the use of antimicrobials and improve care for infectious diseases

**Module 15. Coronavirus Infections**

- ♦ Analyze the discovery and global evolution of coronavirus infections
- ♦ Describe the microbiological characteristics and members of the coronavirus family
- ♦ Study the epidemiological changes in coronavirus infections from their discovery to the present
- ♦ Explore the pathophysiological and pathogenic alterations of coronavirus infections and their clinical implications



*Apply clinical criteria based on evidence for the rational use of antimicrobials and the prevention of resistance”*

05

# Study Methodology

TECH is the world's first university to combine the **case study** methodology with **Relearning**, a 100% online learning system based on guided repetition.

This disruptive pedagogical strategy has been conceived to offer professionals the opportunity to update their knowledge and develop their skills in an intensive and rigorous way. A learning model that places students at the center of the educational process giving them the leading role, adapting to their needs and leaving aside more conventional methodologies.





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*TECH will prepare you to face new challenges in uncertain environments and achieve success in your career”*

## The student: the priority of all TECH programs

In TECH's study methodology, the student is the main protagonist.

The teaching tools of each program have been selected taking into account the demands of time, availability and academic rigor that, today, not only students demand but also the most competitive positions in the market.

With TECH's asynchronous educational model, it is students who choose the time they dedicate to study, how they decide to establish their routines, and all this from the comfort of the electronic device of their choice. The student will not have to participate in live classes, which in many cases they will not be able to attend. The learning activities will be done when it is convenient for them. They can always decide when and from where they want to study.

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*At TECH you will NOT have live classes  
(which you might not be able to attend)”*



### The most comprehensive study plans at the international level

TECH is distinguished by offering the most complete academic itineraries on the university scene. This comprehensiveness is achieved through the creation of syllabi that not only cover the essential knowledge, but also the most recent innovations in each area.

By being constantly up to date, these programs allow students to keep up with market changes and acquire the skills most valued by employers. In this way, those who complete their studies at TECH receive a comprehensive education that provides them with a notable competitive advantage to further their careers.

And what's more, they will be able to do so from any device, pc, tablet or smartphone.

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*TECH's model is asynchronous, so it allows you to study with your pc, tablet or your smartphone wherever you want, whenever you want and for as long as you want”*



## Case Studies and Case Method

The case method has been the learning system most used by the world's best business schools. Developed in 1912 so that law students would not only learn the law based on theoretical content, its function was also to present them with real complex situations. In this way, they could make informed decisions and value judgments about how to resolve them. In 1924, Harvard adopted it as a standard teaching method.

With this teaching model, it is students themselves who build their professional competence through strategies such as Learning by Doing or Design Thinking, used by other renowned institutions such as Yale or Stanford.

This action-oriented method will be applied throughout the entire academic itinerary that the student undertakes with TECH. Students will be confronted with multiple real-life situations and will have to integrate knowledge, research, discuss and defend their ideas and decisions. All this with the premise of answering the question of how they would act when facing specific events of complexity in their daily work.



## Relearning Methodology

At TECH, case studies are enhanced with the best 100% online teaching method: Relearning.

This method breaks with traditional teaching techniques to put the student at the center of the equation, providing the best content in different formats. In this way, it manages to review and reiterate the key concepts of each subject and learn to apply them in a real context.

In the same line, and according to multiple scientific researches, reiteration is the best way to learn. For this reason, TECH offers between 8 and 16 repetitions of each key concept within the same lesson, presented in a different way, with the objective of ensuring that the knowledge is completely consolidated during the study process.

*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.*



## A 100% online Virtual Campus with the best teaching resources

In order to apply its methodology effectively, TECH focuses on providing graduates with teaching materials in different formats: texts, interactive videos, illustrations and knowledge maps, among others. All of them are designed by qualified teachers who focus their work on combining real cases with the resolution of complex situations through simulation, the study of contexts applied to each professional career and learning based on repetition, through audios, presentations, animations, images, etc.

The latest scientific evidence in the field of Neuroscience points to the importance of taking into account the place and context where the content is accessed before starting a new learning process. Being able to adjust these variables in a personalized way helps people to remember and store knowledge in the hippocampus to retain it in the long term. This is a model called Neurocognitive context-dependent e-learning that is consciously applied in this university qualification.

In order to facilitate tutor-student contact as much as possible, you will have a wide range of communication possibilities, both in real time and delayed (internal messaging, telephone answering service, email contact with the technical secretary, chat and videoconferences).

Likewise, this very complete Virtual Campus will allow TECH students to organize their study schedules according to their personal availability or work obligations. In this way, they will have global control of the academic content and teaching tools, based on their fast-paced professional update.



*The online study mode of this program will allow you to organize your time and learning pace, adapting it to your schedule”*

### 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 assess 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.



## The university methodology top-rated by its students

The results of this innovative teaching model can be seen in the overall satisfaction levels of TECH graduates.

The students' assessment of the teaching quality, the quality of the materials, the structure of the program and its objectives is excellent. Not surprisingly, the institution became the top-rated university by its students according to the global score index, obtaining a 4.9 out of 5.

*Access the study contents from any device with an Internet connection (computer, tablet, smartphone) thanks to the fact that TECH is at the forefront of technology and teaching.*

*You will be able to learn with the advantages that come with having access to simulated learning environments and the learning by observation approach, that is, Learning from an expert.*



As such, the best educational materials, thoroughly prepared, will be available in this program:



#### 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.



#### Practicing Skills and Abilities

You will carry out activities to develop specific competencies and skills in each thematic field. Exercises and activities to acquire and develop the skills and abilities that a specialist needs to develop within the framework of the globalization we live in.



#### 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 exclusive educational system for presenting multimedia content 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 education.





**Case Studies**

Students will complete a selection of the best case studies in the field. Cases that are presented, analyzed, and supervised by the best specialists in the world.



**Testing & Retesting**

We periodically assess and re-assess your knowledge throughout the program. We do this on 3 of the 4 levels of Miller's Pyramid.



**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 for 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

# Teaching Staff

To ensure a distinctive and cross-disciplinary approach in this university degree, the teaching team at TECH is composed of experts from various healthcare fields. As such, these specialists in Infectious Diseases have designed content that not only integrates the latest scientific advancements but also incorporates their extensive clinical experience in prestigious global healthcare institutions. In this way, their direct knowledge in managing complex and varied cases provides a unique perspective.





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*You will have the support of a highly specialized teaching team in the management of a wide range of Infectious Diseases”*

## International Guest Director

A pioneer in the use of **CD8+ T Cells** as a therapeutic tool for various **Viral Infections**, Dr. Otto Yang is a prestigious **Physician** highly specialized in **Cellular Immunology**. In addition, he has led multiple **Scientific Research** projects that have laid the groundwork for the development of innovative therapies and even vaccines.

In this sense, he has worked in health institutions of international reference such as **UCLA Health** in California. In this way, his work has been focused on the creation and implementation of modern treatments to manage conditions related to **HIV, AIDS** or **cancer**. Thanks to this, he has driven advances in the design of personalized immunological treatments adapted to the specific needs of each patient. As a result, he has managed to optimize the **overall well-being** of numerous patients in the long term.

Moreover, he has been a key figure in the conduct of **clinical trials** related to **COVID-19**. As such, he has conducted a variety of comprehensive analyses to evaluate the effects of therapies such as **Remdesivir, Baricitinib** and even **Monoclonal Antibodies**. Such work has been essential to identify the most effective therapeutic options and improve informed clinical decision making on a global scale in the face of the SARS-CoV-2 outbreak.

Throughout its 40-year history, its clinical excellence has been rewarded on several occasions in the form of **awards**. An example of this is the award he received from the American Association of Immunologists for his **CAR-T therapies** for the treatment of **Leukemias**. In his strong commitment to advancing healthcare, he has led a wide range of projects that have received more than 30 million dollars in funding. These achievements reflect his strategic leadership in generating cutting-edge solutions that bring tangible value to society.



## Dr. Yang, Otto

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- Chief of the Division of Infectious Diseases at UCLA Health in California, United States
- Founder and Chief Medical Officer of CDR3 Therapeutics, California
- Director of Scientific Research at AIDS Healthcare Foundation, Los Angeles, Los Angeles
- Research Scientist with over 170 published papers
- Scientific Director of Ozymia, Los Angeles
- HIV Physician at MCI-Cedar Junction, Massachusetts
- Infectious Diseases Internship at Harvard Medical School
- Internal Medicine Residency at Bellevue Hospital, New York
- Doctorate in Medicine from Brown University
- Member of: Board of Directors at California Applied Medicine and Frontida Electronic Health Records Software

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



## Management



### Dr. Díaz Pollán, Beatriz

- ♦ Area Specialist, Department of Internal Medicine, Infectious Diseases Unit, La Paz University Hospital
- ♦ Associate Physician, Department of Internal Medicine, Infectious Diseases Unit, San Carlos Hospital
- ♦ Associate Researcher in several research projects
- ♦ Author of dozens of scientific articles on Infectious Diseases
- ♦ Master's Degree in Infectious Diseases and Antimicrobial Therapy from CEU Cardenal Herrera University
- ♦ Specialist in community and non-transmissible infections from the CEU Cardenal Herrera University
- ♦ Specialist in Infectious Diseases and Chronic and Infectious Diseases Diseases from CEU Cardenal Herrera University.
- ♦ Member of the Spanish Society of Infectious Diseases and Clinical Microbiology

## Teachers

### Dr. Rico Nieto, Alicia

- ♦ Microbiology and Parasitology Specialist and Infectious Diseases Expert
- ♦ Assistant Physician, Infectious Diseases Unit, La Paz University Hospital, Madrid
- ♦ Specialist in Microbiology at La Paz University Hospital, Madrid
- ♦ Researcher at the Research Institute of the La Paz University Hospital, Madrid
- ♦ Author of numerous scientific publications
- ♦ Member of: Board of Directors of the Osteoarticular Infection Study Group and the Spanish Society of Infectious Diseases and Clinical Microbiology

### Dr. Loeches Yagüe, María Belén

- ♦ Attending Physician in the Infectious Diseases Unit at La Paz General: University Hospital, Madrid
- ♦ PhD in Medicine from the Autonomous University of Madrid
- ♦ Bachelor's in Medicine from Complutense University of Madrid
- ♦ Master's Degree in Theoretical and Practical Learning in Infectious Diseases from the Complutense University of Madrid
- ♦ Specialized training in Microbiology and Infectious Diseases, Gregorio Marañón General University Hospital,
- ♦ Professor of Infectious Diseases, Infanta Sofía University Hospital, Madrid



**Dr. Arribas López, José Ramón**

- ◆ Department Head of the Infectious Diseases and Clinical Microbiology Unit at the Hospital Universitario La Paz.
- ◆ Coordinator of the High Level Isolation Unit at the Hospital La Paz - Carlos III
- ◆ Director of the the Research Institute of La Paz University Hospital (IdiPAZ)
- ◆ Director of La Paz University Hospital's Foundation
- ◆ Doctor in the Infectious Diseases Unit at Barnes Hospital in the USA
- ◆ Doctor of Medicine, UAM
- ◆ Member of: Interministerial Committee for the management of the Ebola crisis

**Dr. Branches Ramos, Juan Carlos**

- ◆ Internal Medicine Specialist
- ◆ Attending Physician in the Infectious Diseases Unit at La Paz University Hospital,
- ◆ Intern at the University Hospital Sanitas La Zarzuela Madrid.
- ◆ PhD in Medicine and Surgery from the University of Alcalá de Henares
- ◆ Master's Degree in Infectious Diseases in Intensive Care from the Universidad-Empresa Foundation from the University of Valencia.

**Dr. Mora Rillo, Marta**

- ◆ Faculty Specialist of Internal Medicine, La Paz University Hospital, Madrid
- ◆ Clinical Researcher in Infectious Diseases
- ◆ Author of various scientific articles on Infectious Diseases
- ◆ Collaborating Teacher in university studies of Medicine
- ◆ PhD in Medicine from the Autonomous University of Madrid
- ◆ Master's Degree in Infectious Diseases in Intensive Care by the University of Valencia
- ◆ Master's Degree in Tropical and Health Medicine, Autonomous University of Madrid
- ◆ Expert in Emerging and High Risk Virus Pathology, Autonomous University of Madrid

07

# Certificate

This Professional Master's Degree in Infectious Diseases guarantees students, in addition to the most rigorous and up-to-date education, access to a diploma for the Professional Master's Degree issued by TECH Global University.





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



This private qualification will allow you to obtain a diploma for the **Professional Master's Degree in Infectious Diseases** endorsed by TECH Global University, the world's largest online university.

**TECH Global University**, is an official European University publicly recognized by the Government of Andorra ([official bulletin](#)). Andorra is part of the European Higher Education Area (EHEA) since 2003. The EHEA is an initiative promoted by the European Union that aims to organize the international training framework and harmonize the higher education systems of the member countries of this space. The project promotes common values, the implementation of collaborative tools and strengthening its quality assurance mechanisms to enhance collaboration and mobility among students, researchers and academics.

This **TECH Global University** private qualification, is a European program of continuing education and professional updating that guarantees the acquisition of competencies in its area of knowledge, providing a high curricular value to the student who completes the program.

Title: **Professional Master's Degree in Infectious Diseases**

Modality: **online**

Duration: **12 months**

Accreditation: **60 ECTS**



\*Apostille Convention. In the event that the student wishes to have their paper diploma issued with an apostille, TECH Global University 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



## Professional Master's Degree

### Infectious Diseases

- » Modality: online
- » Duration: 12 months
- » Certificate: TECH Global University
- » Accreditation: 60 ECTS
- » Schedule: at your own pace
- » Exams: online

# Professional Master's Degree Infectious Diseases

