

# Postgraduate Certificate

## Clinical Research in Infectious Diseases





## Postgraduate Certificate Clinical Research in Infectious Diseases

- » Modality: online
- » Duration: 6 weeks
- » Certificate: TECH Global University
- » Credits: 6 ECTS
- » Schedule: at your own pace
- » Exams: online

Website: [www.techtute.com/us/medicine/postgraduate-certificate/clinical-research-infectious-diseases](http://www.techtute.com/us/medicine/postgraduate-certificate/clinical-research-infectious-diseases)

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# 01

# Introduction

Clinical research has always been a fundamental activity to reach the results that have allowed millions of scientists to advance in diagnostic strategies, as well as in the treatment of infectious diseases such as AIDS. For this reason, professionals in this field must know in detail the latest scientific evidence that has been developed in their field, in order to undertake their own projects with the guarantee of having the most exhaustive and innovative information in their sector. To do so, you can count on this intensive and dynamic program that TECH has developed for medical specialists. It is an austere and dynamic educational program that includes 180 hours of content so that the physician can get up to date in a 100% online way.





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*The perfect option to delve into what's new in clinical research in infectious diseases is, right now, right in front of you. Are you going to pass it up?"*

COVID-19, AIDS, hepatitis, toxoplasmosis or plague are examples of infectious diseases that, although not eradicated, have been controlled thanks to the exhaustive work of millions of professionals dedicated to their research. COVID-19, AIDS, hepatitis, toxoplasmosis or plague are examples of infectious diseases that, although not eradicated, have been controlled thanks to the exhaustive work of millions of professionals dedicated to their research. An example of this is the reduction in mortality in HIV patients, which, between 2010 and now has decreased by 43%.

Given the global social importance that this implies, it is only fair that the specialists in this field have programs that allow them to catch up in an easy and guaranteed way, so that they can continue to contribute to the advancement of science in a very short time. For this reason, TECH has considered it necessary to develop this Postgraduate Certificate in Clinical Research in Infectious Diseases, a dynamic, multidisciplinary, but, above all, comprehensive and austere program, with which the physician can update their knowledge on this subject and improve their skills in a 100% online way.

To do so, you will have 180 hours of the best theoretical, practical and additional content including: detailed videos, research articles, complementary readings, self-knowledge exercises, images, dynamic summaries and much more. In conclusion, everything the students will need to contextualize the syllabus and delve into those aspects they consider most relevant, attending an academic experience adapted to their availability and demand.

This **Postgraduate Certificate in Clinical Research in Infectious Diseases** contains the most complete and up-to-date scientific program on the market. The most important features include:

- Clinical 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 the self-assessment process can be carried out 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



*You will work on perfecting your skills related to the clinical method in the diagnostic process of infectious disease in a guaranteed manner”*



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*Would you like to delve into advances related to the behavior of infectious diseases in the population? Then this program is perfect for you"*

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

Its 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 education programmed to learn in real situations.

The design of this program focuses on Problem-Based Learning, by means of which the professional must try to solve the different professional practice situations that are presented throughout the academic course. For this purpose, the student will be assisted by an innovative interactive video system created by renowned experts.

*An ideal program to get up to date on current clinical epidemiology and new developments in evidence-based medicine.*

*You will be able to implement the most cutting-edge recommendations related to outbreak control measures into your medical practice.*



# 02 Objectives

Any professional is aware that the advances that have been made in the detection and control of Infectious Diseases have been thanks to the efforts of millions of specialists dedicated to research in this field. For this reason, and with the objective of enabling them to continue working, this time based on the most exhaustive and innovative information, TECH has developed this Postgraduate Certificate. In addition, the graduate who accesses it will find the best academic technology, which will facilitate their updating in a guaranteed way.







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*Are you looking for a qualification to bring you up to date on the use of new computer and communications technologies for research? Then, with this Postgraduate Certificate you will be able to fulfill this objective”*



## General Objectives

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- Develop in the specialist a broad and specialized knowledge of the latest developments related to Clinical Research in Infectious Diseases
- Provide the graduates with the most innovative academic tools that will allow them to fulfill their own objectives in a simple and guaranteed manner



*You will have the most innovative academic tools that will allow you to achieve your goals in a much shorter time than you expect"*





## Specific Objectives

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- ♦ Provide students with advanced, in-depth, updated, and multidisciplinary information that allows them to comprehensively approach the process of health-infectious diseases
- ♦ Provide education 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
- ♦ Develop skills to implement prophylactic plans for the prevention of these diseases



# 03

## Course Management

For both the direction and teaching of this Postgraduate Certificate, TECH has selected an extensive team of physicians versed in the field of Infectious Diseases. They are a group of specialists with a very high human and professional quality, which they have already demonstrated with the exhaustiveness and austerity they have applied to the development of the syllabus and additional material. In addition, they are committed to accompanying the graduate in this academic experience, making available to them the possibility of requesting individualized tutoring to resolve doubts or to ask questions about the profession.





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*The teaching team has selected for this Postgraduate Certificate several clinical cases with which you will be able to work in a simulated way to perfect your medical skills”*



## 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
- M.D. from Brown University
- Member of: Board of Directors at California Applied Medicine and Frontida Electronic Health Records Software



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

## Management



### Dr. Díaz Pollán, Beatriz

- ♦ Faculty Specialist La Paz University Hospital
- ♦ Faculty Specialist at Hospital Clínico San Carlos
- ♦ Resident Physician in San Carlos Clinical Hospital
- ♦ Master's Degree in Clinical Medicine from the Rey Juan Carlos University
- ♦ Degree in Medicine and Surgery from the Autonomous University of Madrid
- ♦ Master's Degree in Infectious Diseases and Antimicrobial Treatment from CEU - Cardenal Herrera University
- ♦ Postgraduate Diploma in Community and Nosocomial Infections from CEU - Cardenal Herrera University
- ♦ Postgraduate Diploma in Chronic Infectious Diseases and Imported Infections from CEU - Cardenal Herrera University
- ♦ Postgraduate Diploma in Microbiological Diagnosis, Antimicrobial Treatment and Research in Infectious Pathology from CEU - Cardenal Herrera University

## Professors

### Dr. Ramos Ramos, Juan Carlos

- ♦ Doctor at La Paz University Hospital. Madrid
- ♦ Official Doctoral Programme in Medicine. University of Alcalá
- ♦ Degree in Medicine and Surgery. Complutense University of Madrid
- ♦ Master's Degree in Infectious Diseases in Intensive Care. University-Company Foundation Valencia
- ♦ Author of Several Scientific Publications

**Dr. Rico Nieto, Alicia**

- ♦ Specialist in the Microbiology and Parasitology Department at La Paz University Hospital
- ♦ Assistant and co-founder of the Infectious Diseases and Clinical Microbiology Unit at La Paz University Hospital
- ♦ Team Member of PROA (Programs of reinforcement, Orientation and Support)
- ♦ Teaching Collaborator of the Department of Medicine at UAM
- ♦ Member of the Infection and Policy Committee of La Paz University Hospital
- ♦ Member of SEIMC (the Spanish Society of Infectious Diseases and Clinical Microbiology)
- ♦ Participation in several research projects
- ♦ Degree in Medicine from the Complutense University of Madrid
- ♦ Doctorate Courses at the Complutense University of Madrid

**Dr. Loeches Yagüe, María Belén**

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

**Dr. Arribas López, José Ramón**

- ♦ Head of the Infectious Diseases and Clinical Microbiology Unit  
La Paz University Hospital
- ♦ 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
- ♦ Doctor of Medicine. Autonomous University of Madrid
- ♦ Degree in Medicine and Surgery. Complutense University of Madrid

**Dr. Mora Rillo, Marta**

- ♦ Specialist in the area of Infectious Diseases at La Paz University
- ♦ Clinical Teaching Collaborator in the Department of Medicine. Autonomous University of Madrid
- ♦ Doctor of Medicine. Autonomous University of Madrid
- ♦ Degree in Medicine and Surgery. University of Zaragoza
- ♦ Master's Degree in Infectious Diseases in Intensive Care. University of Valencia
- ♦ 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
- ♦ Expert in Emerging and High-Risk Virus Pathology. Autonomous University of Madrid
- ♦ Expert in Tropical Medicine. Autonomous University of Madrid



# 04

## Structure and Content

Getting to where TECH has reached in such a short time has been thanks to the fruit of hundreds of professionals who invest their time in shaping the best educational programs in the university academic sector and to present them in a convenient (and accessible to all) 100% online format. They also include hours of diverse additional material: detailed videos, research articles, self-knowledge exercises, complementary readings, images, and clinical cases. In conclusion, everything the graduates need to get up to date in a personalized way and with a schedule totally adapted to their availability.





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*The use of the Relearning methodology in the development of this program allows for a considerable reduction in its teaching load, without sacrificing the slightest hint of quality and austerity”*

## Module 1. Clinical Research in Infectious Diseases

- 1.1. The Clinical Method in the Diagnostic Process of Infectious Diseases
  - 1.1.1. Fundamental Concepts of the Clinical Method: Stages, Principles
  - 1.1.2. The Clinical Method and its Usefulness in Infectology
  - 1.1.3. Most Common Errors in the Application of the Clinical Method
- 1.2. Epidemiology in the Study of Infectious Diseases
  - 1.2.1. Epidemiology as a Science
  - 1.2.2. The Epidemiological Method
  - 1.2.3. Epidemiology Tools Applies in the Study of Infectious Diseases
- 1.3. Clinic Epidemiology and Scientific Evidence-Based Medicine
  - 1.3.1. Scientific Evidence and the Clinical Experience
  - 1.3.2. The Importance of Evidence-Based Medicine in Diagnosis and Treatment
  - 1.3.3. Clinical Epidemiology as a Powerful Weapon of Medical Thinking
- 1.4. Behavior of Infectious Diseases in the Population
  - 1.4.1. Endemic
  - 1.4.2. Epidemic
  - 1.4.3. Pandemic
- 1.5. Confronting Epidemic Outbreaks
  - 1.5.1. Diagnosis of Epidemic Outbreaks
  - 1.5.2. Measures for the Control of Epidemic Outbreaks
- 1.6. Epidemiological Monitoring
  - 1.6.1. Types of Epidemiological Monitoring
  - 1.6.2. Designs of an Epidemiological Monitoring Systems
  - 1.6.3. Usefulness and Importance of Epidemiological Monitoring
- 1.7. International Health Regulations
  - 1.7.1. Components of International Health Regulations
  - 1.7.2. Diseases Subject to International Sanitary Control
  - 1.7.3. Importance of International Health Regulations
- 1.8. Mandatory Reporting Systems for Infectious Diseases
  - 1.8.1. Characteristics of Diseases Subject to Mandatory Reporting
  - 1.8.2. Role of the Doctor in Mandatory Reporting Systems for Infectious Diseases
- 1.9. Vaccines
  - 1.9.1. Immunological Basis of Vaccination
  - 1.9.2. Development and Production of Vaccines
  - 1.9.3. Diseases Preventable with Vaccines
  - 1.9.4. Experiences and Results of the Vaccine System in Cuba
- 1.10. Research Methodology in the Field of Health
  - 1.10.1. The Importance of Public Health in Research Methodology as a Science
  - 1.10.2. Scientific Thought in Healthcare
  - 1.10.3. The Scientific Method
  - 1.10.4. Stages of Scientific Research
- 1.11. Information Management and the Use of New Information and Communication Technologies (ICT)
  - 1.11.1. The Use of New ICT in the Management of Knowledge for Healthcare Professionals in the Professional Clinical, Teacher and Research Work
  - 1.11.2. Information Literacy
- 1.12. Design of Research Studies for Infectious Diseases
  - 1.12.1. Types of Studies in Healthcare and Medical Sciences
  - 1.12.2. The Design of Research Applied to Infectious Diseases
- 1.13. Descriptive and Inferential Statistics
  - 1.13.1. Summary Measures for the Different Variables in Scientific Research
  - 1.13.2. Central Tendency Measures: Mean, Mode and Median
  - 1.13.3. Dispersion Measures: Variants and Standard Deviation
  - 1.13.4. Statistical Estimation
  - 1.13.5. Population and Sample
  - 1.13.6. Tools for Inferential Statistics
- 1.14. Design and Use of Databases
  - 1.14.1. Types of Databases
  - 1.14.2. Programs and Statistical Packages for the Management of Databases
- 1.15. Protocol of Scientific Research
  - 1.15.1. Protocol Components of Scientific Research
  - 1.15.2. Usefulness of Protocol of Scientific Research

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- 1.16. Clinical Trials and Meta Analysis
    - 1.16.1. Types of Clinical Trials
    - 1.16.2. The Role of a Clinical Trial in Healthcare Research
    - 1.16.3. Meta Analysis: Conceptual Definitions and Their Methodological Design
    - 1.16.4. Application of Meta-Analyses and Their Role in the Medical Sciences
  - 1.17. Critical Reading of Research Results
    - 1.17.1. Medical Journals, Their Role in the Dissemination of Scientific Information
    - 1.17.2. Medical Journals of High-Impact on a Global Level in the Field of Infectology
    - 1.17.3. Methodological Tools for Critical Reading of Scientific Literature
  - 1.18. Publication of Scientific Research Results
    - 1.18.1. The Scientific Article
    - 1.18.2. Types of Scientific Articles
    - 1.18.3. Methodology Requirements for the Publication of Scientific Research Results
    - 1.18.4. The Process of Scientific Publications in Medical Journals

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*Do not hesitate and enroll now in a program with which you will enjoy, from the hand of experts and hundreds of professionals like you, a comprehensive and guaranteed update"*



05

# Methodology

This academic program offers students a different way of learning. Our methodology uses a cyclical learning approach: **Relearning**.

This teaching system is used, for example, in the most prestigious medical schools in the world, and major publications such as the **New England Journal of Medicine** have considered it to be one of the most effective.





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*Discover Relearning, a system that abandons conventional linear learning, to take you through cyclical teaching systems: a way of learning that has proven to be extremely effective, especially in subjects that require memorization"*



## At TECH we use the Case Method

What should a professional do in a given situation? Throughout the program, students will face multiple simulated clinical cases, based on real patients, in which they will have to do research, establish hypotheses, and ultimately resolve the situation. There is an abundance of scientific evidence on the effectiveness of the method. Specialists learn better, faster, and more sustainably over time.

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



According to Dr. Gérvas, the clinical case is the annotated presentation of a patient, or group of patients, which becomes a "case", an example or model that illustrates some peculiar clinical component, either because of its teaching power or because of its uniqueness or rarity. It is essential that the case is based on current professional life, trying to recreate the real conditions in the physician's professional practice.

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

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

1. Students who follow this method not only achieve the assimilation of concepts, but also a development of their mental capacity, through exercises that evaluate real situations and the application of knowledge.
2. Learning is solidly translated into practical skills that allow the student to better integrate into the real world.
3. Ideas and concepts are understood more efficiently, given that the example situations are based on real-life.
4. Students like to feel that the effort they put into their studies is worthwhile. This then translates into a greater interest in learning and more time dedicated to working on the course.



## Relearning Methodology

At TECH we enhance the case method with the best 100% online teaching methodology available: Relearning.

This university is the first in the world to combine the study of clinical cases with a 100% online learning system based on repetition, combining a minimum of 8 different elements in each lesson, a real revolution with respect to the mere study and analysis of cases.

*Professionals will learn through real cases and by resolving complex situations in simulated learning environments. These simulations are developed using state-of-the-art software to facilitate immersive learning.*





At the forefront of world teaching, the Relearning method has managed to improve the overall satisfaction levels of professionals who complete their studies, with respect to the quality indicators of the best online university (Columbia University).

With this methodology, more than 250,000 physicians have been trained with unprecedented success in all clinical specialties regardless of surgical load. Our pedagogical methodology is developed in a highly competitive environment, with a university student body with a strong socioeconomic profile and an average age of 43.5 years old.

*Relearning will allow you to learn with less effort and better performance, involving you more in your specialization, developing a critical mindset, defending arguments, and contrasting opinions: a direct equation to success.*

In our program, learning is not a linear process, but rather a spiral (learn, unlearn, forget, and re-learn). Therefore, we combine each of these elements concentrically.

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



This program offers the best educational material, prepared with professionals in mind:



#### Study Material

All teaching material is produced by the specialists who teach the course, specifically for the course, so that the teaching content is highly specific and precise.

These contents are then applied to the audiovisual format, to create the TECH online working method. All this, with the latest techniques that offer high quality pieces in each and every one of the materials that are made available to the student.



#### Surgical Techniques and Procedures on Video

TECH introduces students to the latest techniques, the latest educational advances and to the forefront of current medical techniques. All of this in direct contact with students and explained in detail so as to aid their assimilation and understanding. And best of all, you can watch the videos as many times as you like.



#### Interactive Summaries

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

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



#### Additional Reading

Recent articles, consensus documents and international guidelines, among others. In TECH's virtual library, students will have access to everything they need to complete their course.







#### Expert-Led Case Studies and Case Analysis

Effective learning ought to be contextual. Therefore, TECH presents real cases in which the expert will guide students, focusing on and solving the different situations: a clear and direct way to achieve the highest degree of understanding.



#### Testing & Retesting

We periodically evaluate and re-evaluate students' knowledge throughout the program, through assessment and self-assessment activities and exercises, so that they can see how they are achieving their goals.



#### Classes

There is scientific evidence on the usefulness of learning by observing experts. The system known as Learning from an Expert strengthens knowledge and memory, and generates confidence in future difficult decisions.



#### Quick Action Guides

TECH offers the most relevant contents of the course in the form of worksheets or quick action guides. A synthetic, practical, and effective way to help students progress in their learning.



# 06 Certificate

The Postgraduate Certificate in Clinical Research in Infectious Diseases guarantees students, in addition to the most rigorous and up-to-date education, access to a Postgraduate Certificate 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 program will allow you to obtain your **Postgraduate Certificate in Clinical Research 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** title 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: **Postgraduate Certificate in Clinical Research in Infectious Diseases**

Modality: **online**

Duration: **6 weeks**

Accreditation: **6 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  
development languages  
virtual classroom



**Postgraduate Certificate**  
Clinical Research in  
Infectious Diseases

- » Modality: online
- » Duration: 6 weeks
- » Certificate: TECH Global University
- » Credits: 6 ECTS
- » Schedule: at your own pace
- » Exams: online

# Postgraduate Certificate

## Clinical Research in Infectious Diseases

