

Postgraduate Certificate

The Clinical Method and
Scientific Research in
Infectious Diseases





Postgraduate Certificate The Clinical Method and Scientific 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/pharmacy/postgraduate-certificate/clinical-method-scientific-research-infectious-diseases

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01

Introduction

Through this complete TECH program in Clinical Method and Scientific Research in Infectious Diseases, students will be able to update their knowledge with the help of experts. In addition, you will always have the highest scientific standards throughout the qualification. You will learn the latest techniques and developments in the field and develop your knowledge and skills in infectious diseases from a pharmaceutical point of view. A unique opportunity to specialise in a high-demand professional field.





With this Postgraduate Certificate, you have the opportunity to update your knowledge in a comfortable way and without renouncing the highest scientific standards, to incorporate the latest advances in the approach to infectious pathology in your daily pharmaceutical practice"

Infectious diseases remain the leading cause of death and disability in the world. In 2016, of the total 56.4 million deaths worldwide, 33% were due to infectious diseases, 30% to cardiovascular diseases and 10% to cancer. The fight against disease will have two simultaneous fronts: infectious diseases and chronic non-communicable diseases.

Among the 17.3 million people who died from infections in 2016, the most frequent causes of death were lower respiratory infections (3.7 million), malaria (2.2 million), tuberculosis (1.3 million), diarrhea (1.4 million), and HIV/AIDS infection (1.1 million). The most important factors to consider in relation to infectious diseases are demographics, human behavior, technological and industrial development, economic variations in land use, intercontinental travelling and commerce, climate change, microbiotic adaptation and finally the disappearance or reduction of efficient public health measures.

These factors, interacting with each other, have conditioned that we should not consider any part of the planet reasonably isolated from the rest, nor impossible the appearance, reappearance or dissemination of imported or apparently eradicated infectious diseases in our environment.

The complex international epidemiological situation so far this century, exemplified by the deliberate release of bacillus anthracis spores, the emergence of West Nile virus, the epidemic of severe acute respiratory syndrome (SARS), the zoonotic spread of smallpox, the threat of pandemic influenza, the Ebola epidemic in Africa, the emergence of cases of yellow fever, Dengue and Cholera, the emergence of new arbovirolosis in the Americas region, such as Chikungunya and more recently Zika, together with morbidity from other endemic infectious diseases, such as HIV/AIDS, leptospirosis, tuberculosis, pneumonia and the increase in antibiotic resistance with the development of multi-resistant bacteria, highlight the unprecedented need to improve the process of training and development of human capital.

This **Postgraduate Certificate in The Clinical Method and Scientific 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 The Clinical Method and Scientific Research 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
- ◆ New developments on The Clinical Method and Scientific Research in Infectious Diseases
- ◆ Practical exercises where the self-assessment process can be carried out to improve learning
- ◆ An algorithm-based interactive learning system for decision-making in the clinical situations presented throughout the course
- ◆ Theoretical lessons, questions to the expert, debate forums on controversial topics, and individual reflection assignments
- ◆ Content that is accessible from any fixed or portable device with an Internet connection



Update your knowledge in infections management and improve your professional assessment as a pharmacist"

“*TECH brings to this program the highest scientific rigor with the objective of training the most reputable pharmacists in the sector*”

Its faculty is made up of prestigious and renowned professionals, with a long history in health care, teaching and research, who have worked in many countries on several continents, developing a 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 multimedia educational tools that allow the professional, based primarily on the problem-solving method, to face the solution of real problems in their daily clinical practice, which will allow them to progress in the acquisition of knowledge and the development of skills that will impact their future professional work.

It should be noted that each of the contents generated, as well as the videos, self-tests, clinical cases and modular exams have been thoroughly reviewed, updated and integrated by the professors and the team of experts that make up the working group, in order to facilitate the learning process in a didactic way that will allow the objectives of the teaching program to be achieved.

This is the opportunity you were looking for to grow as a pharmacist and get updated on the The Clinical Method and Scientific Research in Infectious Diseases.

Do not miss the opportunity to learn about the advances in the treatment of infections to incorporate them into your daily pharmaceutical practice.



02

Objectives

The fundamental purpose of the educational program is to specialize and improve the pharmacist to achieve a deep theoretical mastery of the latest and most current scientific knowledge in the area of clinical infectious diseases, as well as the development of skills that allow them to approach the complex process of health and infectious diseases in individuals and communities with more comfort and safety.



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This program will generate a sense of confidence in the performance of pharmacy practice, which will help you grow personally and professionally”



General Objectives

- ♦ Update or deepen your knowledge and develop your skills for daily clinical practice in healthcare, teaching or research roles in the field of infectious diseases in order to provide individual or group population care that allows for the improvement of health indicators
- ♦ Improve the pharmaceutical and health care of patients with infectious diseases, based on comprehensive care, the application of the clinical epidemiological method and the correct use of antimicrobials in accordance with the most up-to-date scientific evidence





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 specialization and practical-theoretical improvements that enable a reliable clinical diagnosis, supported by the efficient use of diagnostic methods to indicate an effective integral therapy

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Improve the care of your patients by taking advantage of the program offered by the Postgraduate Certificate in The Clinical Method and Scientific Research in Infectious Diseases”

03

Course Management

This academic program includes the most specialized teaching staff in the current educational market. They are specialists selected by TECH to develop the whole syllabus. In this way, starting from their own existence and the latest evidence, they have designed the most up-to-date content that provides a guarantee of quality in such a relevant subject.



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TECH offers the most specialized teaching staff in the field of study. Enroll now and enjoy the quality you deserve”

International Guest Director

Dr. Jatin Vyas is a prestigious physician specializing in Microbial Infectious Pathologies and Fungal Immunology. His work philosophy is based on providing holistic care to his patients, with an empathetic approach to pain management. Likewise, his work, code of ethics and values have been recognized on multiple occasions in the form of awards, including the Kass Award for “Clinical Excellence in Infectious Diseases”.

It should be noted that, after completing his residency in Anesthesiology at Case Western Reserve University in Cleveland, he obtained a fellowship in Interventional Pain Management from the University of Iowa. In line with this, he has combined this work with his role as a Research Scientist, focusing on immune responses to pathogenic fungi. In this sense, he has published a wide production of specialized articles in areas such as viral elimination and evolution of SARS-CoV-2, differentiation of functional airway microfold cells or epithelial defects of the respiratory tract associated with the TAT3 mutation in Job’s Syndrome. On the other hand, he has been in charge of leading multiple research projects focused on infectious conditions and innovative treatments. Likewise, he has contributed significantly to the understanding and management of several contagious bacterial diseases.

In his commitment to clinical excellence, he regularly participates in the most renowned scientific congresses and medical symposia worldwide. He shares his extensive experience and knowledge on subjects such as antibiotic resistance, the adaptation mechanisms of pathogenic fungi or the most cutting-edge therapies to combat different viral infections. Thanks to this, Dr. Jatin Vyas has contributed cutting-edge strategies to raise awareness of these conditions in both the healthcare community and society at large.



Dr. Vyas, Jatin

- Director of Internal Medicine at Massachusetts General Hospital, United States
- Researcher funded by the National Institutes of Health of the United States Government
- Research Fellow in Interventional Pain Management at the University of Iowa
- Research Fellow in Chemistry at the Welch Foundation, California
- Residency in Anesthesiology at Case Western Reserve University, Cleveland, Ohio
- Doctorate in Medicine, University of Arkansas
- Bachelor of Science in Forensic Science
- Board Certification in Infectious Diseases by the American Board of Internal Medicine
- Board Certification in Internal Medicine by the American Board of Internal Medicine



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

04

Structure and Content

The educational program has been created by a group of professors and professionals in pharmacy and medicine, from various medical specialties, with extensive research and teaching experience in several countries in Africa, Central and South America, interested in integrating the latest and most current scientific knowledge of clinical infectology and antimicrobial therapeutics, to ensure specialization and professional development to improve the daily clinical practice of professionals who investigate or work with patients or populations with infectious diseases.



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This Postgraduate Certificate in The Clinical Method and Scientific Research in Infectious Diseases contains the most complete and up-to-date program on the market”

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
- 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

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.





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 be confronted with multiple simulated clinical cases based on real patients, in which they will have to investigate, establish hypotheses and ultimately, resolve the situation. There is an abundance of scientific evidence on the effectiveness of the method. Pharmacists learn better, more quickly 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, attempting to recreate the actual conditions in a pharmacist'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. Pharmacists who follow this method not only grasp concepts, but also develop their mental capacity, by evaluating real situations and applying their 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.

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.

Pharmacists 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 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 115,000 pharmacists have been trained with unprecedented success in all clinical specialties, regardless of the surgical load. This pedagogical methodology is developed in a highly demanding environment, with a university student body with a high socioeconomic profile and an average age of 43.5 years.

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 created specifically for the course by specialist pharmacists who will be teaching the course, so that the didactic development is highly specific and accurate.

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.



Video Techniques and Procedures

TECH introduces students to the latest techniques, to the latest educational advances, to the forefront of current pharmaceutical care procedures. All of this, first hand, and explained and detailed with precision to contribute to assimilation and a better understanding. And best of all, you can watch them as many times as you want.



Interactive Summaries

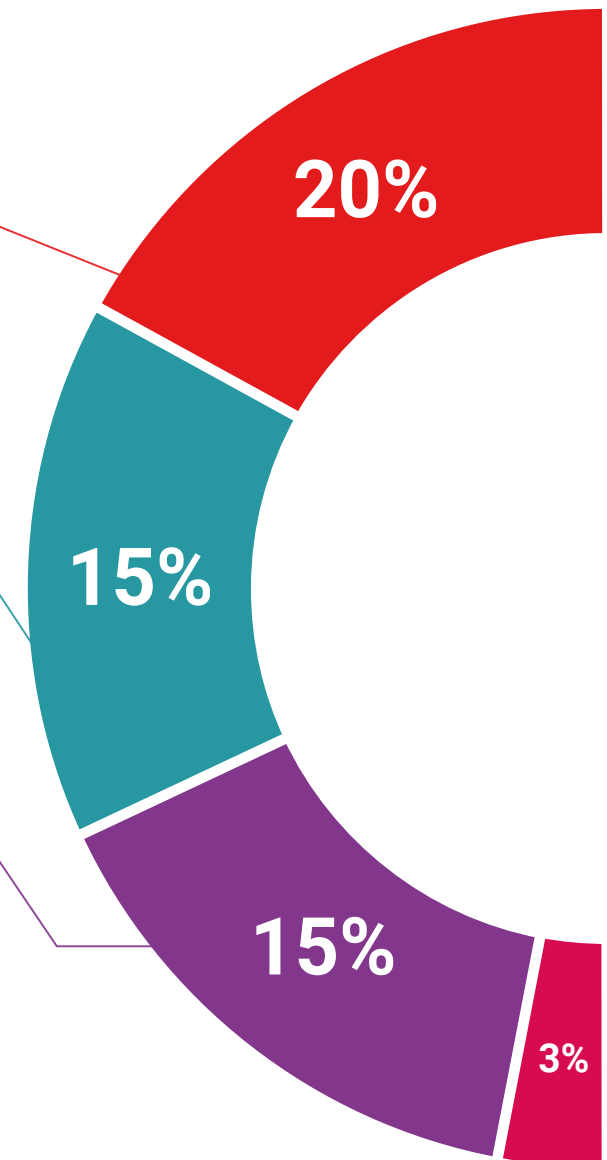
The TECH team presents the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

This unique multimedia content presentation training system 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, 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 & 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 The Clinical Method and Scientific 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 The Clinical Method and Scientific 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 The Clinical Method and Scientific 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

online training

development languages

virtual classroom

tech global
university

Postgraduate Certificate

The Clinical Method and
Scientific Research in
Infectious Diseases

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- » Duration: 6 weeks
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