

Postgraduate Certificate

Infectious Diseases and Microbiology in
the Emergency Department for Nursing





Postgraduate Certificate Infectious Diseases and Microbiology in the Emergency Department for Nursing

- » Modality: online
- » Duration: 6 weeks
- » Certificate: TECH Global University
- » Credits: 5 ECTS
- » Schedule: at your own pace
- » Exams: online

Website: www.techtute.com/us/nursing/postgraduate-certificate/infectious-diseases-microbiology-emergency-department-nursing

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01

Introduction

Infectious diseases are one of the basic pillars of healthcare, since it is necessary to adequately tackle these pathologies not only at the individual level, but also to solve a global public health problem. Therefore, the need for nurses in this field has led TECH to design the most comprehensive academic program in the market on Infectious Diseases and Microbiology in the Emergency Department.





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Caring for patients with infectious diseases is a challenge for all healthcare professionals involved. Specialize with us and achieve success in your interventions”

The objective of this Postgraduate Certificate in Infectious Diseases and Microbiology in the Emergency Department for Nursing is to train health professionals in this field, so that they are able to offer more personalized care to patients with these pathologies. For this, TECH has a team of experts with extensive professional and teaching experience, who can provide students with all their knowledge in a didactic way to promote their learning.

To this end, it is necessary to take into account that, in addition to the classic infectious pathologies, in recent years there have been entities with a great impact on public health and of great complexity in their management, such as infection by the human immunodeficiency virus, the increase in bacterial resistance, infection in the context of patients with iatrogenic immunosuppression, or the exponential increase in imported tropical infectious diseases in our environment.

All this makes it necessary for nurses to specialize and be up to date in the main developments related to the field of infectology, especially in the work of Emergency Departments, since work in this area can be complex as it is outside a specialized unit, as well as determinant in improving the patient's health.

One of the advantages of this program is that, as it is a 100% online training, the professionals will be able to decide when and from where to study, without commitments or obligations, thus being able to combine their study time with the rest of their daily obligations.

This **Postgraduate Certificate in Infectious Diseases and Microbiology in the Emergency Department for Nursing** contains the most complete and up-to-date scientific program on the market. The most outstanding features of this program are:

- ♦ The development of clinical cases presented by experts in infectious diseases and microbiology
- ♦ The graphic, schematic, and eminently practical contents with which they are created provide scientific and practical information on the disciplines that are essential for professional
- ♦ Therapeutic developments on the intervention in Infectious Diseases
- ♦ Practical exercises where to carry out the self-assessment process to improve learning
- ♦ An algorithm-based interactive learning system for decision-making in the clinical situations presented throughout the course
- ♦ Its special emphasis on research 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



Superior training for high-level professionals who want to give a plus in the care of their patients"

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This Postgraduate Certificate is the best investment you can make in the selection of a refresher program for two reasons: in addition to updating your knowledge in Infectious Diseases and Microbiology in the Emergency Department, you will obtain a certificate from the largest Digital University in the world: TECH”

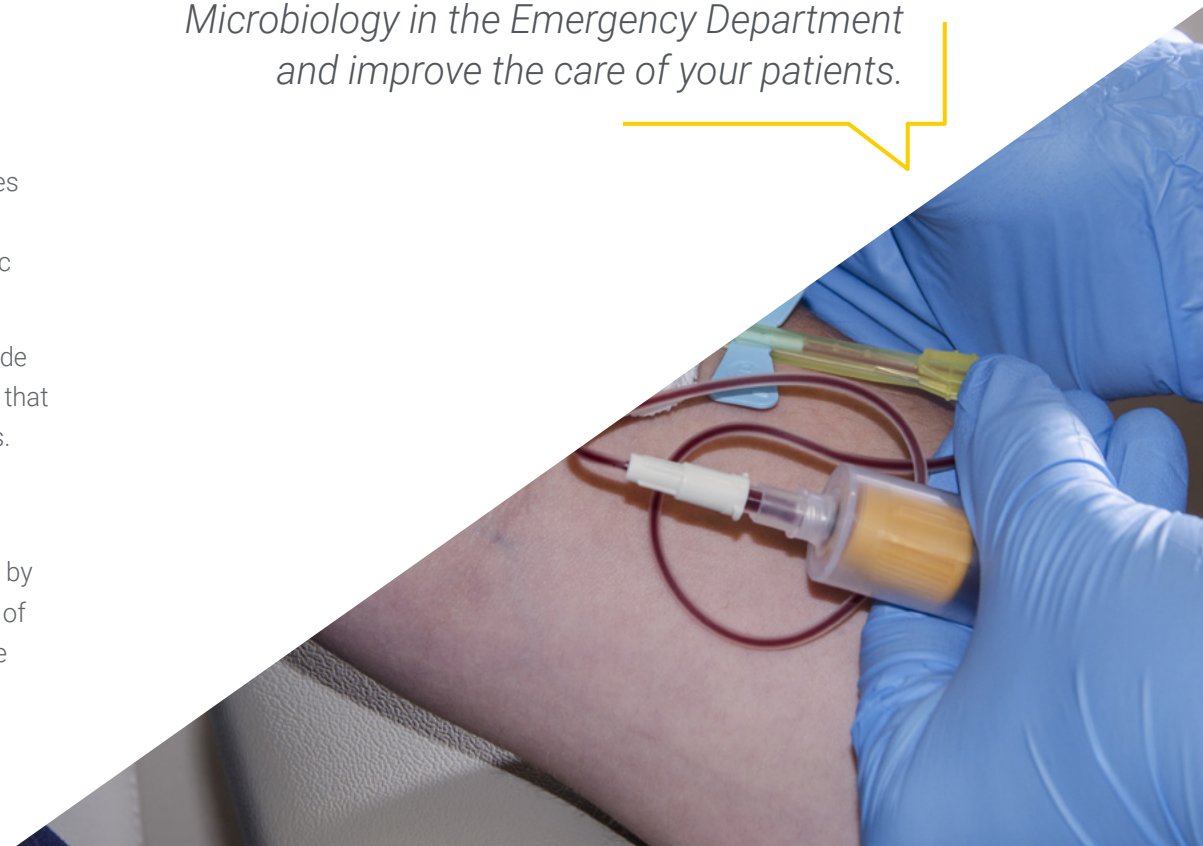
Its teaching staff includes professionals belonging to the field of Infectious Diseases and Microbiology in the Emergency Department, who bring to this training the experience of their work, in addition to recognized specialists from leading scientific societies.

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 training experience designed to train for real-life situations.

The design of this program focuses on Problem-Based Learning, through which the nurse must try to solve the different professional practice situations that arise throughout the Postgraduate Certificate. To do so, the professional will be assisted by an innovative interactive video system developed by recognized experts in the field of Infectious Diseases and Microbiology in the Emergency Department, with extensive teaching experience.

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

Take the opportunity to learn about the latest advances in Infectious Diseases and Microbiology in the Emergency Department and improve the care of your patients.



02 Objectives

The Postgraduate Certificate in Infectious Diseases and Microbiology in the Emergency Department for Nursing is aimed at facilitating the performance of the health professional dedicated to the treatment of urgent infectious pathology in all areas, but especially in the emergency department.





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We give you the opportunity to achieve academic excellence thanks to this specialized program in Infectious Diseases and Microbiology”



General Objectives

- Provide the necessary theoretical knowledge to be able to understand the environment in which the professional activity is developed to care for patients with Infectious Diseases
- Provide the appropriate treatment in the different cases of infectious diseases
- Gain in-depth understanding of the areas in which professionals must be trained, in order for them to be able to provide the best practice when treating infectious diseases



Acquire the most up-to-date knowledge in this field of work and apply advanced protocols in this intervention in your day-to-day work"





Specific Objectives

Module 1. Update on Infectious Diseases

- ◆ Define virulence factors and toxins.
- ◆ Identify the main human pathogens in our environment.
- ◆ Explain the different current scenarios of infection in the Emergency Department
- ◆ Describe the etiopathogenic profiles of bacterial infections
- ◆ Describe the etiopathogenic profiles of viral infections
- ◆ Describe the etiopathogenic profiles of fungal infections
- ◆ Describe the etiopathogenic profiles of microbacterial infections
- ◆ Describe the etiopathogenic profiles of parasitic infections

Module 2. The Microbiology Laboratory in the Emergency Department

- ◆ Describe the process of collecting specimens
- ◆ Define which specimens are most commonly requested in the Emergency Department
- ◆ Explain the collection of specimens in patients with devices
- ◆ Describe the management of specimens in the laboratory
- ◆ Explain the clinical significance of bacterial resistance
- ◆ Define the techniques available for emergency diagnoses
- ◆ Describe the interpretation of preliminary results
- ◆ Explain the analytical interpretation of the different types of samples
- ◆ Define the procedures in hospitals without on-call microbiologists
- ◆ Explain the diagnostic techniques that can possibly be performed in the emergency department laboratory

03

Course Management

The program includes in its teaching staff reference specialists in Infectious Diseases and Microbiology in the Emergency Department and other related areas, who pour into this specialization the experience of their work. Additionally, other recognized specialists participate in its design and preparation, which means that the program is developed in an interdisciplinary manner.





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Learn from leading professionals in the field of infectious diseases about the main developments in this field"

Management



Dr. García del Toro, Miguel

- ♦ PhD in Medicine from the University of Valencia
- ♦ Head of the Infectious Diseases Unit at the General University Hospital Consortium of Valencia
- ♦ 50 national and international publications in journals and books, 33 of them indexed in Pubmed and/or Scopus
- ♦ President Congress of the National Group for the Study of Hepatitis of the Society of Infectious Diseases and Clinical Microbiology 2017
- ♦ More than 200 communications to National and International Congresses in the specialty of Infectious Diseases, HIV and Viral Hepatitis
- ♦ Main investigator of some twenty clinical trials and/or research projects



Ms. García Rodríguez, Magdalena

- ♦ Degree in Medicine and Surgery
- ♦ Specialist in Internal Medicine
- ♦ Attending Physician in the Infectious Diseases Unit and the Consorcio General Hospital Valencia
- ♦ Head of the International Health and Travel Advice Section
- ♦ Author of several publication and research projects
- ♦ Founding member and advisor of the Chagas Disease Association of the Valencian Community
- ♦ Member of a vaccine study group for the Spanish Society of Infectious Diseases and Clinical Microbiology
- ♦ Member of a Malaria study group for the Spanish Society of Infectious Diseases and Clinical Microbiology



Ms. Ricart Olmos, María del Carmen

- Degree in Medicine and Surgery
- Specialist in Internal Medicine
- Attending Physician in the Infectious Diseases Unit and the Consorcio General University Hospital, Valencia
- Author of several publication and research projects
- Editor of the Consensus Document on Age and Human Immunodeficiency Virus Infection Expert Group of the Secretariat of the National AIDS Plan (SPNS), Spanish Society of Geriatrics and Gerontology (SEGG)
- Master's Degree in Infectious Diseases in Intensive Care

04

Structure and Content

The structure of the contents has been designed by a team of professionals from the best hospitals and universities, aware of the relevance of this specialization in order to intervene in the treatment and monitoring of Infectious Diseases and Microbiology in the Emergency Department and committed to quality teaching through new educational technologies.





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

Module 1. Update on Infectious Diseases

- 1.1. Principles of Infection
 - 1.1.1. Virulence Factors and Toxins
 - 1.1.2. Defensive Mechanisms of the Host
- 1.2. Main Human Pathogens in our Environment
 - 1.2.1. Current Epidemiology of the Infection
 - 1.2.2. Data on a Worldwide Level
 - 1.2.3. Data in our Environment
 - 1.2.4. Microbial Resistance
- 1.3. Current Scenarios of Infection in the Emergency Department
 - 1.3.1. Elderly Patients
 - 1.3.2. Oncology Patients
 - 1.3.3. Chronic Renal Patients on Dialysis
 - 1.3.4. Transplant Recipient
 - 1.3.5. HIV Infection
 - 1.3.6. Travelers and Immigrants
- 1.4. Etiopathogenic Profiles of Infection
 - 1.4.1. Bacterial Infections
 - 1.4.2. Viral Infections
 - 1.4.3. Fungal Infections
 - 1.4.4. Microbacterial Infections
 - 1.4.5. Parasitic Infections



Module 2. The Microbiology Laboratory in the Emergency Department

- 2.1. Process of Sample Collection
 - 2.1.1. General Considerations for Taking, Conserving and Transporting the Samples for Microbiological Study
 - 2.1.2. Material for Sample Collection
- 2.2. Management of Samples in the Laboratory
 - 2.2.1. Receiving Samples
 - 2.2.2. Processing
 - 2.2.3. Methods and Techniques used for Microbiological Diagnosis According to the Main Infectious Syndromes
- 2.3. Techniques Available for Emergency Diagnoses
 - 2.3.1. Bacteria
 - 2.3.2. Virus
 - 2.3.3. Fungi
 - 2.3.4. Mycobacteria
 - 2.3.5. Parasites
- 2.4. Interpretation of Preliminary Results
 - 2.4.1. Interpretation of Microbiological Diagnostic Tests
- 2.5. Procedures in Hospitals Without On-call Microbiologists
 - 2.5.1. Disadvantages of Not Having an On-call Microbiologist
 - 2.5.2. Advantages of Having an On-call Microbiologist
 - 2.5.3. On-call Care without a Microbiologist



You will have the most innovative didactic resources on the market"

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 Nursing School we use the Case Method

In a given situation, what should a professional do? 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. Nurses learn better, faster, and more sustainably over time.

With TECH, nurses can experience a learning methodology 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, in an attempt to recreate the real conditions in professional nursing practice.

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Did you know that this method was developed in 1912 for Harvard 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. Nurses who follow this method not only grasp concepts, but also develop their mental capacity by evaluating real situations and applying their knowledge.
2. The learning process has a clear focus on practical skills that allow the nursing professional to better integrate knowledge acquisition into the hospital setting or primary care.
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 Postgraduate Certificate.



Relearning Methodology

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

This University is the first in the world to combine case studies with a 100% online learning system based on repetition, combining a minimum of 8 different elements in each lesson, which is a real revolution compared to the simple study and analysis of cases.



The nurse 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 we have trained more than 175,000 nurses with unprecedented success, in all specialties regardless of practical workload. All this in a highly demanding environment, where the students have a strong socio-economic 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 produced by the specialists who teach the course, specifically for the course, so that the teaching content is really 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.



Nursing Techniques and Procedures on Video

We introduce you to the latest techniques, to the latest educational advances, to the forefront of current medical techniques. All 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

The student's knowledge is periodically assessed and re-assessed throughout the program, through evaluative and self-evaluative activities and exercises: in this way, students can check how they are doing in terms of achieving their goals.



Classes

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

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



Quick Action Guides

TECH offers the most relevant contents of the Postgraduate Certificate 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 Infectious Diseases and Microbiology in the Emergency Department for Nursing guarantees, in addition to the most rigorous and up-to-date training, access to a certificate issued by TECH Global University.



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

This private qualification will allow you to obtain a **Postgraduate Certificate in Infectious Diseases and Microbiology in the Emergency Department for Nursing** 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: **Postgraduate Certificate in Infectious Diseases and Microbiology in the Emergency Department for Nursing**

Modality: **online**

Duration: **6 weeks**

Accreditation: **5 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.

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