

**Postgraduate Certificate**  
Infections in Children with  
Immunodeficiencies or  
Other Deficits



## Postgraduate Certificate Infections in Children with Immunodeficiencies or Other Deficits

- » Modality: online
- » Duration: 6 weeks
- » Certificate: TECH Global University
- » Credits: 9 ECTS
- » Schedule: at your own pace
- » Exams: online

Website: [www.techtute.com/us/pharmacy/postgraduate-certificate/infections-children-immunodeficiencies-other-deficits](http://www.techtute.com/us/pharmacy/postgraduate-certificate/infections-children-immunodeficiencies-other-deficits)

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# 01

# Introduction

This program in Infections in Children with Immunodeficiencies or Other Deficits is an update for professionals in the sector, which will allow them to delve deeper into such a competitive field. This is a high demand program in the pharmacy sector, with a complete and innovative online format, which facilitates the development of the professional, allowing them to study at their preferred and more convenient times.



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*Learn about the latest advances in Infections in Children with Immunodeficiencies or Other Deficits and improve the care of your patients"*

This program arises as a response to an important need in the field of Infectious Diseases. Today, this need responds, among other things, to the emergence of certain diseases that are unknown or have little practice (zika, chikungunya, hemorrhagic fevers, among others), and with others that have fallen into oblivion or are unknown to less experienced pharmacists such as diphtheria, measles, pertussis (whooping cough), or flaccid paralysis associated with poliovirus vaccines.

At the therapeutic level, the emergence of resistance (BLEES, MRSA, carbapenem-resistant enterobacteria, etc.), often caused by the unwise and rational use of drugs, creates problems for the clinician perform it comes to initial empirical treatment in certain situations.

On the other hand, parents who refuse vaccines, children from low-income backgrounds, infections in transplant recipients, children with devices and fevers without focus in well-vaccinated children are increasingly common situations that the pharmacist has to deal with.

All this means that, in order to provide the best possible care, the pharmacist must continuously update themselves, even if they are not a specialist, since the percentage of visits or inter-consultations related to infection is very high. If we add to this the increasing amount of information provided by parents, sometimes not always contrasted, professional updating becomes essential to be able to provide adequate information according to the current scientific evidence at all times.

With this specialization, you will have the opportunity to study a program that brings together the most advanced and in depth knowledge in the field, where a group of highly regarded professors with extensive international experience provides you with the most complete and up to date information on the latest advances and techniques in Infectious Diseases.

This **Postgraduate Certificate in Infections in Children with Immunodeficiencies or Other Deficits** contains the most complete and up-to-date scientific program on the market. The most important features include:

- ♦ Development of clinical cases presented by experts in Infectology
- ♦ 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 Diagnostic and Therapeutic Novelties on Infections in Children with Immune Deficiencies or Other Deficits
- ♦ An algorithm-based interactive learning system for decision-making in the clinical situations presented throughout the course
- ♦ With a special emphasis on evidence-based medicine and research methodologies in Infections in Children with Immunodeficiencies or Other Deficits
- ♦ All of this will be complemented by 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



*Improve your knowledge through this program, where you will find the best teaching material with real clinical cases. Learn here about the latest advances in the specialty to be able to provide quality medical care"*

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*This Postgraduate Certificate may be the best investment you can make in the selection of a refresher program for two reasons: in addition to updating your knowledge in Infections in Children with Immunodeficiencies or Other Deficits, you will obtain a qualification from TECH Global University"*

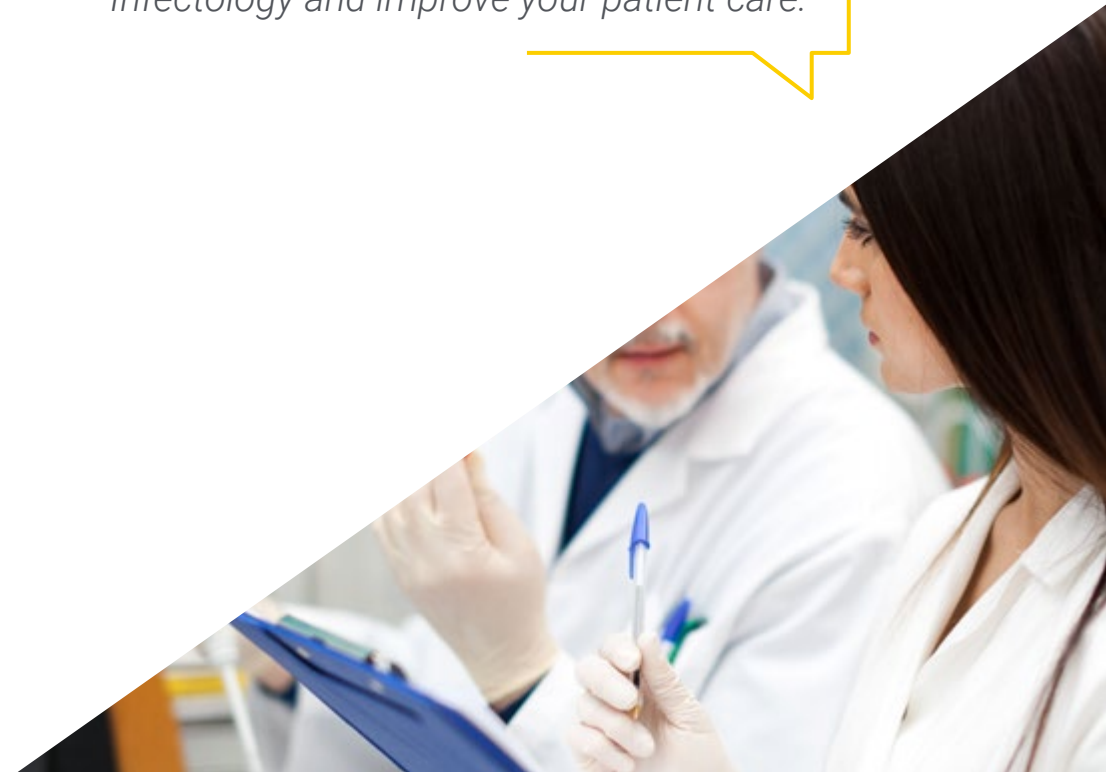
It includes, in its teaching staff, health professionals belonging to the field of Pediatric Infectious Diseases, who bring to this program the experience of their work, in addition to recognized specialists belonging to scientific societies of reference.

Thanks to its multimedia content developed with the latest educational technology, they will allow the professional a situated and contextual learning, that is to say, a simulated environment that will provide an immersive learning programmed to train in real situations.

This program is designed around Problem-Based Learning, whereby the professional must try to solve the different professional practice situations that arise throughout the program. For this reason, you will be assisted by an innovative, interactive video system created by renowned and experienced experts in the field of Infectology with extensive teaching experience.

*The Postgraduate Certificate includes real clinical cases and exercises to bring the content of the program closer to the clinical practice of a pharmacist.*

*Make the most of the opportunity to update your knowledge in Pediatric Infectology and improve your patient care.*



# 02 Objectives

The program's main objective is focused on theoretical and practical learning, so that the pharmacist is able to master, in both a practical and rigorous manner, Pediatric Infectious Diseases.





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*This refresher program will generate a sense of confidence in the performance of the pharmacist's practice, which will help you grow personally and professionally"*



### General Objective

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- Update the knowledge of pharmacists who care for children, through the latest advances in the field of Primary Care or Hospital Infectious Diseases, in order to increase the quality of care, physician safety and achieve the best outcome for the patient



*Take the opportunity and take the step to get up to date on the latest developments in Infections in Children with Immunodeficiencies or Other Deficits"*





## Specific Objectives

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- ◆ Develop better skills and working methods related to immunosuppressed patients
- ◆ Addressing hospital-acquired infection with outbreak control and the topicality of multidrug-resistant bacteria
- ◆ Describe how to deal with immunosuppressed, hemato-oncologic, transplanted, neutropenic, cystic fibrosis, asplenic or major burns patients
- ◆ Develop a strategy to deal with suspected infection(s) with associated primary immunodeficiency
- ◆ Describe the management of vertically transmitted or adolescent HIV infection
- ◆ Describe the use of antiretrovirals, determination of resistance and side effects
- ◆ Determine the infectological performance of children from low-income countries, sub-Saharan, refugees, affected by poverty
- ◆ Explain the practical management of parasitic diseases
- ◆ Define the responsibility of the clinician in prescribing antibiotic treatment and its consequences
- ◆ Identify the main groups of antibacterials, antivirals and antifungals with their innovations and the judicious and rational way of drug choice
- ◆ Describe the optimal and rational use of antibacterials against multidrug-resistant bacteria
- ◆ Describe the current use of vaccines, doses, intervals, side effects, responses to anti-vaccine movements
- ◆ Describe the indications for antibiotic prophylaxis and post-exposure prophylaxis
- ◆ Define the situations in which a contact study is indispensable

03

# Course Management

The program includes in its teaching staff reference specialists in Pediatric Infectious Diseases, Pediatrics, Microbiology and other related fields, who bring to this program 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 reference professionals, the latest advances in procedures in the field of Pediatric Infectious Diseases”*

## Guest Director



### Dr. Hernández-Sampelayo Matos, Teresa

- ♦ Head of Pediatrics Service and ACES Cajal Hospital Gregorio Marañón General University Hospital
- ♦ Head of the Pediatric Infectious Diseases Section at the Gregorio Marañón General University Hospital
- ♦ Accreditation by ANECA as a contract professor Doctor of the National Agency for Quality Assessment and Accreditation
- ♦ Emergency Pediatrics at the Autonomous University of Madrid. Medicine
- ♦ Pediatric Gastroenterology, Autonomous University of Madrid. Medicine
- ♦ Neonatology Autonomous University of Madrid. Medicine
- ♦ Project on Determination of free cytokine profile in plasma and specific response against Mycobacterium tuberculosis. Utility as biomarkers in children with active tuberculous disease and latent tuberculous infection
- ♦ Pediatric Antifungal Optimization Program at Astllas Pharma Europe Ltd

## Management



### Dr. Otero Reigada, María del Carmen

- ♦ Former chief clinician in infectious diseases and infants, La Fe from Valencia University Hospital
- ♦ Pediatric Infectious Diseases Specialist
- ♦ Specialist in Clinical Microbiology
- ♦ Currently pediatrician and pediatric infectologist, at Valencia Hospital

## Professors

### Dr. Aguilera Alonso, David

- ♦ Attending Physician in Pediatrics and Specific Areas / Pediatric Infectious Diseases Unit at the Gregorio Marañón General University Hospital
- ♦ Degree in Medicine and Surgery, University of Valencia
- ♦ Master's Degree in Pediatric Infectious Diseases Complutense University of Madrid
- ♦ Professional Master's Degree on HIV infection Rey Juan Carlos University
- ♦ University Expert in Basic Pediatric Infectious Diseases Rey Juan Carlos University

### Dr. Calle Miguel, Laura

- ♦ Health Service of the Principality of Asturias, Health Area V, Pediatric Specialist Physician
- ♦ Master's Degree in Research in Medicine at the University of Oviedo
- ♦ Degree in Medicine and Surgery, University of Oviedo
- ♦ Doctor of Medicine. Pediatric Diseases, University of Oviedo
- ♦ Specialist in Pediatrics and Specific Areas of Gijón, Principality of Asturias, Spain

### Dr. Hernanz Lobo, Alicia

- ♦ Assistant Pediatric Physician at the Gregorio Marañón General University Hospital. Graduated in Medicine, Complutense University of Madrid (UCM) in 2012
- ♦ Specialist in Pediatrics and its Specific Areas, having Training as a resident intern at the Gregorio Marañón General University Hospital
- ♦ Master's Degree in Pediatric Infectious Diseases Complutense University of Madrid
- ♦ Degree and Master's Degree in Medicine Complutense University of Madrid
- ♦ Official Doctoral Program in Health Sciences Research Complutense University of Madrid

### Ms. Manzanares Casteleiro, Ángela

- ♦ Doctor, Autonomous University of Madrid. Completion of the Pediatrics specialty in May 2020
- ♦ Currently working up to 12/31/2020 in the Pediatric Infectious Diseases Section, 12 de Octubre University Hospital and the Pediatric Clinical Research Unit, 12 de Octubre Hospital
- ♦ Studying since October 2020 the Master's Degree in Pediatric Infectious Diseases at the Complutense University of Madrid with clinical practice at the Gregorio Marañón Hospital
- ♦ Researcher at the Foundation for investigation. Research at the 12 de Octubre University Hospital
- ♦ Resident Medical Intern, 12 de Octubre University Hospital, Madrid

### Dr. Argilés Aparicio, Bienvenida

- ♦ MIR Specialist in Pediatrics and its Specialized Areas at La Fe University Hospital (Valencia)

### Dr. Bosch Moragas, María

- ♦ MIR Specialist in Pediatrics and its specific areas at La Fe University Hospital, Valencia. CAP st Anadreu, Barcelona

### Dr. Cantón Lacasa, Emilia

- ♦ Research Center (Microbiology Laboratory), La Fe University Hospital (Valencia)

### Dr. Cambra Sirera, José Isidro

- ♦ Head of Section, Pediatrics Service, Lluís Alcanyís Hospital (Xàtiva)

**Dr. Canyete Nieto, Adela**

- ♦ Head of Pediatric Oncology Unit, La Fe Polytechnic and University Hospital (Valencia)

**Dr. Couselo Jerez, Miguel**

- ♦ Doctor of Medicine
- ♦ Specialist in Pediatric Surgery
- ♦ Pediatric Surgery Service, La Fe University and Polytechnic Hospital (Valencia)

**Dr. Cortell Aznar, Isidoro**

- ♦ Specialist in Pediatric Pulmonology, La Fe University and Polytechnic Hospital (Valencia)

**Dr. Dasí Carpio, María Ángeles**

- ♦ Head of Hematology Unit, La Fe Polytechnic and University Hospital (Valencia)
- ♦ Professor at the Universitat de València

**Dr. Fonseca Martín, Rosa**

- ♦ Specialist in Pediatric Surgery
- ♦ Pediatric Surgery Service, La Fe University and Polytechnic Hospital (Valencia)

**Dr. Gobernado Serrano, Miguel**

- ♦ Specialist in Clinical Microbiology, attached to the University and Polytechnic Hospital of La Fe (Valencia)

**Dr. González Granda, Damiana**

- ♦ Microbiology Unit of (Xàtiva Hospital, Valencia Spain)

**Dr. Ibáñez Martínez, Elisa**

- ♦ Specialist in Clinical Microbiology and Parasitology, La Fe University and Polytechnic Hospital (Valencia)

**Dr. Izquierdo Macián, Isabel**

- ♦ Head of the Neonatology Service of the Child Disease Area, La Fe Polytechnic and University Hospital (Valencia)

**Dr. Martínez Morel, Héctor**

- ♦ Area Specialist Physician (FEA) in Preventive Medicine and Public Health, La Fe Polytechnic and University Hospital (Valencia)

**Dr. Meyer García, María Carmen**

- ♦ Area Specialist Physician (FEA) in Preventive Medicine and Public Health, La Fe Polytechnic and University Hospital (Valencia)

**Dr. Modesto i Alarcón, Vicente**

- ♦ Head of Section of Pediatric ICU and Resuscitation, La Fe Polytechnic and University Hospital (Valencia)

**Dr. Mollar Maseres, Juan**

- ♦ Doctor of Medicine. Head of Section of Preventive Medicine, La Fe University and Polytechnic Hospital (Valencia)

**Dr. Monte Boquet, Emilio**

- ♦ Head of Department Pharmacy Service, La Fe University and Polytechnic Hospital (Valencia)

**Dr. Montegudo Montesinos, Emilio**

- ♦ Head of the Pediatrics Department, La Fe University and Polytechnic Hospital (Valencia)

**Dr. Negre Policarpo, Sergio**

- ♦ PhD in Medicine and Surgery from the University of Valencia
- ♦ Head of the Pediatric Gastroenterology and Nutrition Section at the Quironsalud Hospital (Valencia)





**Dr. Oltra Benavent, Manuel**

- ♦ Pediatric Specialist Physician in Pediatrics and its Specialized Areas, Francesc de Borja Hospital. Gandía Health Department

**Dr. Ortí Martín, Ana**

- ♦ Specialist in Pediatrics and its Specific Areas, Centro de Salud Padre Jofré (Valencia)

**Dr. Peiró Molina, Esteban**

- ♦ Specialist Physician
- ♦ Pediatric Cardiology Section, La Fe University and Polytechnic Hospital (Valencia)

**Dr. Rincón Lopez, Elena María**

- ♦ Assistant Physician, Pediatric Infectious Diseases Section, Gregorio Marañón General University Hospital (Madrid)
- ♦ Professional Master's Degree in Pediatric Infectious Diseases at the Complutense University of Madrid

**Dr. Rodríguez, Héctor**

- ♦ Specialist in Pediatrics and its Specific Areas, Centro de Salud at Manises Hospital (Valencia)

**Ms. Sastre Cantón, Macrina**

- ♦ Vaccine Research Area
- ♦ Foundation for the Promotion of Health and Biomedical Research of the Valencian Community (FISABIO)

# 04

# Structure and Content

The structure of the contents has been designed by a team of professionals knowledgeable about the implications of studying in daily medical practice in Pediatric Infectious Diseases, aware of the relevance of the current the preparation to be able to care for patients with infectious pathology with quality teaching through new educational technologies.





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*This Postgraduate Certificate in Infections in Children with Immunodeficiencies or Other Deficits contains the most complete and up to date program on the market”*

## Module 1. Infection in the Patient at Risk

- 1.1. Children with Immunomodulatory Treatments in Rheumatology
  - 1.1.1. Management of Patients Undergoing Immunomodulatory Treatments
- 1.2. Current Empiricism of Infections in Oncology Patients.
  - 1.2.1. Adenovirus Infections in Hemato-Oncology
  - 1.2.2. Diagnostic and Therapeutic Approach to Febrile Neutropenia in Cancer Patients
  - 1.2.3. Empirical and Targeted Treatment of Infections in Cancer Patients
- 1.3. Infections and Current Response to Children with Underlying Pathology
  - 1.3.1. Risk infections in Patients with Hemolytic Anemias (emoglobinopathies and Membranopathies)
  - 1.3.2. Treatment of Severe Neutropenia and Congenital and Functional Asplenia
  - 1.3.3. Infections in Children with Cystic Fibrosis
- 1.4. Current Approach to Infections in the Transplanted Child
  - 1.4.1. Cytomegalovirus and BK Virus Infections in Transplant Recipients

## Module 2. HIV Infection in Pediatrics and Adolescence

- 2.1. Vertical Transmission
  - 2.1.1. Current Situation of Vertical Transmission in our Environment
  - 2.1.2. Prevention and Management
- 2.2. Infection in Adolescents
- 2.3. Antiretrovirals in Pediatrics
  - 2.3.1. Updates
  - 2.3.2. Combinations
  - 2.3.3. Determination of Resistance
  - 2.3.4. Side Effects and Metabolic Alterations
- 2.4. Pharmacokinetics
  - 2.4.1. Interactions
  - 2.4.2. Level Monitoring
- 2.5. When and How to Start HAART
- 2.6. Current Management of HBV and HCV Coinfection





### Module 3. Infections Associated with Social Changes or Deficits

- 3.1. Infections associated with Social Deficits
  - 3.1.1. Infections Associated with Social Deficits
  - 3.1.2. Current Child Poverty and Infections in our Environment
- 3.2. Tropical Diseases
  - 3.2.1. Initial Infectiological Examination of Newly Arrived Immigrant Children and Children from International Adoptions
  - 3.2.2. Febrile Syndrome in the Child Coming from a Low-Income Country or from the Tropics, Regardless of the Reason for the Trip
  - 3.2.3. Malaria. Current Diagnostic and Therapeutic Management
  - 3.2.4. Vector-Borne Infections Dengue. Chikungunya Zika
  - 3.2.5. Vector-Borne Diseases Schistosomiasis Onchocerciasis
  - 3.2.6. Parasitic Diseases Ascaris, Amoebas, Tenias, Oxyuris, Strongyloides, Trichuris Trichiura



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

04

# 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.



05

# Certificate

This Postgraduate Certificate in Infections in Children with Immunodeficiencies or Other Deficits 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 Infections in Children with Immunodeficiencies or Other Deficits** 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.

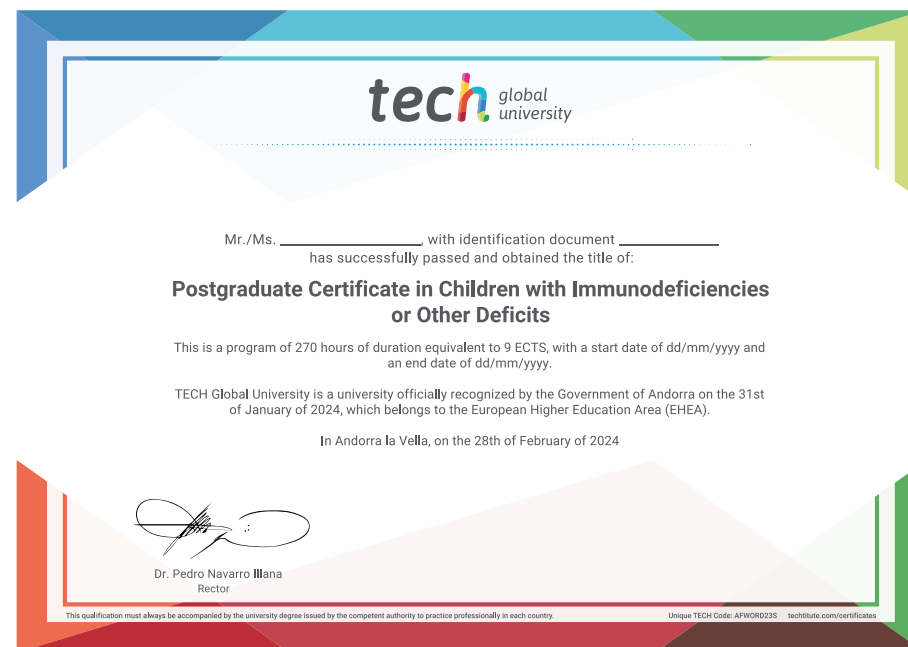
This **TECH Global University** title is a European program of continuing education and professional updating that guarantees the acquisition of competencies in its area of knowledge, providing a high curricular value to the student who completes the program.

Title: **Postgraduate Certificate in Infections in Children with Immunodeficiencies or Other Deficits**

Modality: **online**

Duration: **6 weeks**

Accreditation: **9 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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