

# Postgraduate Certificate

## Infectious Pathology in Hospital Pediatrics





## Postgraduate Certificate Infectious Pathology in Hospital Pediatrics

- » 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/infectious-pathology-hospital-pediatrics](http://www.techtute.com/us/medicine/postgraduate-certificate/infectious-pathology-hospital-pediatrics)

# Index

01

Introduction

---

*p. 4*

02

Objectives

---

*p. 8*

03

Course Management

---

*p. 12*

04

Structure and Content

---

*p. 16*

05

Methodology

---

*p. 20*

06

Certificate

---

*p. 28*

# 01

# Introduction

The COVID-19 pandemic has made the need for professionals to constantly update their knowledge in the area of infectious diseases quite apparent. When this concern is extended to the field of pediatrics, the urgency in knowing the latest developments regarding antibiotic therapy, skin and soft tissue infections or community-acquired pneumonia, among other pathologies, becomes even more evident. This TECH program brings together the most recent scientific findings concerning these areas, also expanding on the advances in the understanding of SARS-CoV-2 infection in pediatric patients. A complete course aimed at updating and broadening professionals' knowledge for the daily medical practice in infectious pathologies in hospital pediatrics.





“

*Continue perfecting your techniques in the approach to pediatric infectious pathologies thanks to this Postgraduate Certificate”*

Emerging viruses such as SARS-CoV-2 have triggered research and findings concerning infectious pathologies. The area of hospital pediatrics is not exempt from them, so professionals are required to keep up to date with all the latest developments.

TECH has brought together a great team of professionals in pediatrics to develop this Postgraduate Certificate. The program includes the latest scientific evidence on systemic inflammatory response syndrome, infection in immunocompromised patients, central venous catheter-related infections and other pathologies of special interest to the pediatric professional.

This makes this course an excellent academic option to get up to date on infectious pathologies in hospital pediatrics, with the support of the largest online academic institution.

Specialists will also have the advantage of being able to take this program at their own pace, without fixed schedules or classes. All the content is 100% online and is available from the first day of the course, which allows students to decide when, where and how to study the entire course load.

This **Postgraduate Certificate in Infectious Pathology in Hospital Pediatrics** contains the most complete and up-to-date scientific program on the market. Its most notable features are:

- ♦ Practical case studies presented by experts in hospital pediatrics
- ♦ 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 practice
- ♦ Practical exercises where self-assessment can be used to improve learning
- ♦ Special emphasis on innovative methodologies in the approach to pneumological affections
- ♦ 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



*Learn about the most up-to-date pediatric considerations in the face of future pandemics, as well as the most recent advances in multisystemic inflammatory syndrome related to COVID-19”*

“

*Get up to speed with a program designed to meet all your needs, created by professionals who know the current reality in pediatric infectious pathologies”*

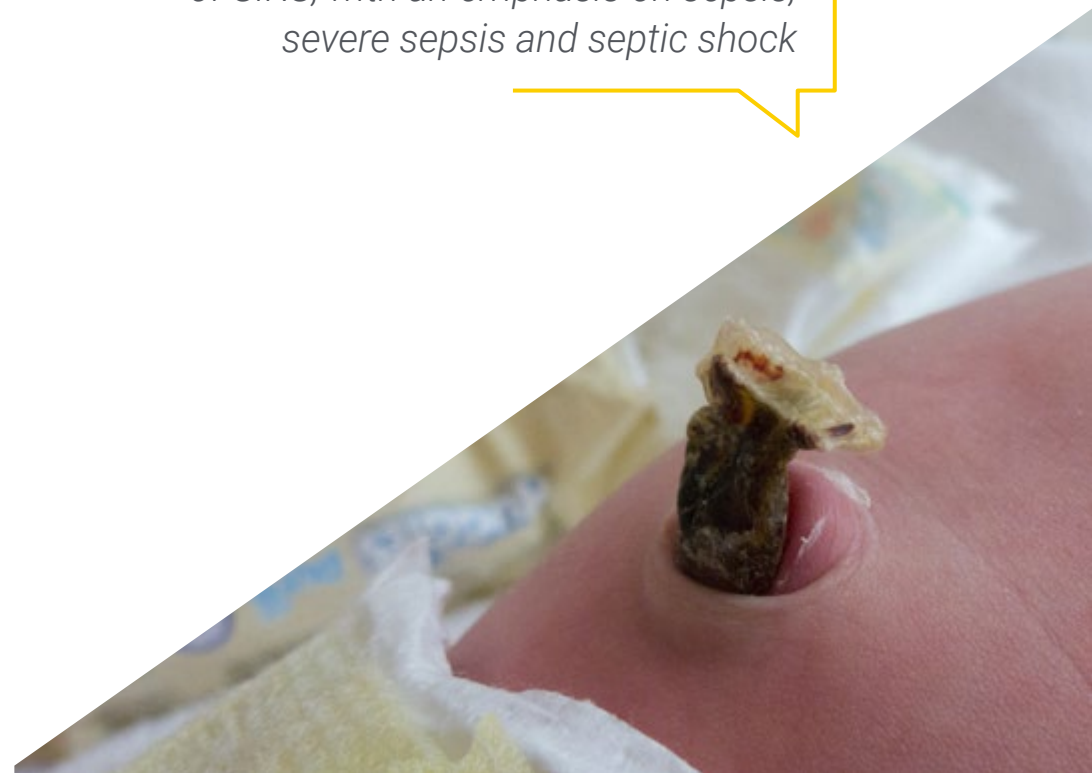
The program's teaching staff includes professionals from the sector who contribute their work experience to this program, as well as renowned specialists from leading societies and prestigious universities.

The multimedia content, developed with the latest educational technology, will provide the professional with situated and contextual learning, i.e., a simulated environment that will provide an immersive program designed to learn 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 during the academic year. For this purpose, the student will be assisted by an innovative interactive video system created by renowned and experienced experts.

*You will be the one to choose when, where and how to take on the course load, giving you the flexibility you need to balance your academic, professional and personal lives*

*Access the latest clinical recognition of SIRS, with an emphasis on sepsis, severe sepsis and septic shock*



# 02

# Objectives

The program objective is to provide professionals with the latest scientific knowledge and research on infectious pathologies in hospital pediatrics. For this reason, TECH has set very clear objectives for specialists to reach throughout the course, while they enjoy the constant support of all our academic and technical staff.







“

*You will have access to the best possible educational material concerning infectious pathologies such as recurrent, periodic and prolonged fevers”*



## General Objectives

---

- Master the latest techniques and knowledge in modern hospital pediatrics
- Become highly fluent in pediatric patient management, ensuring maximum quality and safety during the process
- Develop exemplary skills to provide high quality care, guaranteeing patient safety based on the latest update of scientific evidence
- Gain up-to-date knowledge of hospital pediatrics





## Specific Objectives

---

- ◆ Focus on key issues such as antibiotic policy and isolation measures
- ◆ Analyze the most frequent infectious pathologies through new algorithms and protocols, as well as traveler and immigrant infections and new emerging viruses

“

*You will achieve your goal of getting a professional update thanks to a program that combines the most recent scientific evidence with the most effective professional practice”*

03

# Course Management

This course is directed by a teaching team that brings together great academic and professional experience in the approach to infectious pathologies in pediatric patients. This is a quality guarantee for specialists, since all the teaching material mirrors the current situation and prevailing treatments in the field of pediatrics. Our professors' great professionalism is reflected in how thoroughly all the topics on the program have been prepared.

“

*You will be advised by professionals who have first-hand knowledge of the latest scientific theory and practice in the treatment of infectious pathologies in pediatric patients”*

## Management



### Dr. García Cuartero, Beatriz

- ♦ Chief of the Pediatrics Service and coordinator of the Pediatric Endocrinology and Diabetes Unit Ramón y Cajal University Hospital, Madrid, Spain
- ♦ Specialist Physician in Pediatrics at Severo Ochoa, Leganés University Hospital, Madrid
- ♦ Primary Care Pediatrician, Area 4, Madrid
- ♦ Degree in Medicine and Surgery from the Complutense University of Madrid
- ♦ Specialist Degree in Pediatrics, MIR accreditation at the Infantil Niño Jesús University Hospital, Madrid Specific Training Area: Pediatric Endocrinology
- ♦ PhD from the Autonomous University of Madrid (UAM) Expression of manganese superoxide dismutase, heme oxygenase and nitric oxide synthase enzymes in cultured pancreatic islets with interleukin 1 by in situ hybridization Unanimous Cum Laude Award
- ♦ Associate Professor of Pediatrics, Faculty of Medicine Alcalá de Henares University
- ♦ Social Security Research Fund (FISS) Grant, Steno Diabetes Center, Copenhagen/Hagedorn Research Laboratory Project: Pancreatic beta cell destruction mechanism and free radicals in type 1 diabetes mellitus



## Professors

### **Dr. De Tejada Barásoain, Enrique Otheo**

- ◆ Area Specialist, Ramón y Cajal University Hospital, Pediatrics Service
- ◆ Internal Hospital Pediatrics and Pediatric Infectious Diseases General Pediatrics and Pediatric Infectious Diseases Consultation
- ◆ Member of the HURyC Antimicrobial Policy Committee
- ◆ Degree in Medicine and Surgery from the Autonomous University of Madrid
- ◆ PhD in Medicine, Doctoral Thesis: Etiology of Community Acquired Pneumonia in children, University of Alcalá, outstanding cum laude honors
- ◆ Associate Professor of Pediatrics at the University of Alcalá
- ◆ Member of the Spanish Society of Internal Hospital Pediatrics
- ◆ Member of the Spanish Society of Pediatric Infectology

# 04

## Structure and Content

Based on the pedagogical methodology of *relearning*, the program contents meet the highest specialist demands and expectations. Thanks to the most advanced educational technology, specialists will have access to numerous practical guides, interactive summaries, videos of clinical cases and real examples of the approach to infectious pathologies in the pediatric setting. The course load is therefore reduced by visually contextualizing all the content taught.







“

*The topics have been elaborated so concisely and with such precision by our professors that they prove to be very useful reference material”*

## Module 1. Infectious Diseases in Pediatrics

- 1.1. Healthcare-Associated Infections (HAIs) Measures to Prevent the Transmission of Infections
  - 1.1.1. Repercussions in a Pediatric Inpatient Ward
  - 1.1.2. Epidemiology and Incidence
  - 1.1.3. Types of HAIs
  - 1.1.4. Preventing the Transmission of Infections
    - 1.1.4.1. Types of Isolation and Indications for Specific Microorganisms
    - 1.1.4.2. Hand Hygiene
    - 1.1.4.3. Other Measures
- 1.2. The Laboratory in the Diagnosis of Infectious Diseases: Taking Microbiological Samples
  - 1.2.1. Biochemical and Hematologic Findings in Infectious Diseases
  - 1.2.2. Clinical Considerations Prior to Microbiological Sampling
  - 1.2.3. Recommended Biological Samples for the Diagnosis of the Most Frequent Infections: Conventional Microbiology, Rapid and Molecular Techniques
  - 1.2.4. Available Microbiological Techniques and their Indications
  - 1.2.5. Sample Transport and Storage
- 1.3. Empirical Antibiotic Therapy: Appropriate Use of Antibiotics
  - 1.3.1. General Principles in Antibiotic Treatment: Structured Clinical Rationale
  - 1.3.2. How to Adequately Select Antibiotics
  - 1.3.3. When Is an Antibiotic Changed? Targeted Antibiotic Therapy
  - 1.3.4. What Is an Adequate Use of Antibiotics? Importance and Repercussions
  - 1.3.5. The Role of New Antibiotics in Hospital Pediatrics
- 1.4. Special Fever Situations: Recurrent Fever, Prolonged Fever, Fever in Patients Returning from the Tropics
  - 1.4.1. Recurrent and Periodic Fevers
    - 1.4.1.1. Causes
    - 1.4.1.2. Diagnostic Attitude
  - 1.4.2. Prolonged Fever
    - 1.4.2.1. Causes
    - 1.4.2.2. Assessment
  - 1.4.3. Fever in Patients Returning from the Tropics
    - 1.4.3.1. General Considerations (Traveler, Immigrant and Adopted Children)
    - 1.4.3.2. Most Common Causes
    - 1.4.3.3. Assessment
- 1.5. Community-Acquired Pneumonia (CAP): Etiological Diagnosis and Antibiotic Therapy. Complicated Pneumonia Therapy
  - 1.5.1. Etiology According to Age Group
  - 1.5.2. Diagnostic Attitude
  - 1.5.3. CAP Therapy in Home Patients
  - 1.5.4. Diagnostic Attitude to "Pneumonia that Does Not Look Good"
  - 1.5.5. Complicated Pneumonia
    - 1.5.5.1. Types: Parapneumonic Pleural Effusion, Necrotizing Pneumonia, Lung Abscess
    - 1.5.5.2. Diagnostic and Therapeutic Attitude
- 1.6. Skin and Soft Tissue Infections (SSTIs): Osteoarticular Infection (OAI)
  - 1.6.1. SSTI: Diagnostic and Therapeutic Attitude
    - 1.6.1.1. Impetigo
    - 1.6.1.2. Genital Infection in Children
    - 1.6.1.3. Folliculitis and Boils
    - 1.6.1.4. Omphalitis
    - 1.6.1.5. Staphylococcal Scalded Skin Syndrome
    - 1.6.1.6. Ectima
    - 1.6.1.7. Necrotizing Fasciitis
    - 1.6.1.8. Bites
  - 1.6.2. OAI: Diagnostic and Therapeutic Attitude
    - 1.6.2.1. Incidence, Pathophysiology in Different Locations and Etiology According to Age Group
    - 1.6.2.2. Septic Arthritis
    - 1.6.2.3. Osteomyelitis



- 1.7. Genital Infection in Children and Adolescents
  - 1.7.1. Implications and Frequency of Sexually Transmitted Infections (STIs) in Adolescence
  - 1.7.2. STI Syndromes
    - 1.7.2.1. Genital Ulcers
    - 1.7.2.2. Inguinal Lymphadenopathy
    - 1.7.2.3. Condylomas
    - 1.7.2.4. Urethritis
  - 1.7.3. Microbiological Diagnosis and Treatment for STIs
  - 1.7.4. Vulvovaginitis in Girls and Adolescents: Bacterial Vaginosis
  - 1.7.5. Pelvic Inflammatory Disease
  - 1.7.6. Orchitis and Epididymitis
- 1.8. Central Venous Catheter (CVC) Related Infections
  - 1.8.1. Types of CVC
  - 1.8.2. Common Etiological Agents
  - 1.8.3. Clinical, Research and Diagnostic Criteria
  - 1.8.4. Treating CVC Related Infections

“ Thanks to relearning, you will not have to invest long hours into updating your knowledge, as you will acquire the latest concepts in a natural and progressive way”

# 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 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.

“

*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 learning, 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 Infectious Pathology in Hospital Pediatrics guarantees students, in addition to the most rigorous and up-to-date education, access to a Postgraduate Certificate issued by TECH Global University.



“

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

This program will allow you to obtain your **Postgraduate Certificate in Infectious Pathology in Hospital Pediatrics** 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 Infectious Pathology in Hospital Pediatrics**

Modality: **online**

Duration: **6 weeks**

Accreditation: **6 ECTS**



future  
health confidence people  
education information tutors  
guarantee accreditation teaching  
institutions technology learning  
community commitment  
personalized service innovation  
knowledge present  
online tra  
development langu  
virtual classroom



## Postgraduate Certificate Infectious Pathology in Hospital Pediatrics

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

# Postgraduate Certificate

## Infectious Pathology in Hospital Pediatrics

