

Postgraduate Certificate Neurological Pathology in Hospital Pediatrics





Postgraduate Certificate Neurological Pathology in Hospital Pediatrics

Course Modality: Online

Duration: 6 weeks

Certificate: TECH Technological University

Official N° of Hours: 150 h.

Website: www.techitute.com/medicine/postgraduate-certificate/neurological-pathology-hospital-pediatrics

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01

Introduction

The management of the most common pediatric neurological pathologies such as headaches, epilepsies or febrile seizures has advanced enormously in recent years, especially after the COVID-19 pandemic where these kinds of conditions were brought into the limelight. In order to continue aiding specialists in perfecting their knowledge and skills, TECH offers this course where the main scientific findings and practical advances of the last decades are compiled. This includes complete topics devoted to Guillain-Barré Syndrome, Acute Ataxia and Pediatric Stroke, among other pathologies of great interest. All this in a unique and versatile program, adapted to the demands of specialists.





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Update your knowledge on the main neurological pathologies in pediatrics by reviewing real clinical cases and recent scientific studies of great interest”

Neurological pathologies attract the attention of scientists and specialists from all over the world, so it is not surprising that advances in this field are common. Technological developments in areas such as genetics and imaging tests have enabled better diagnosis and provided new knowledge of a multitude of conditions, which makes it even more urgent for specialists to update their knowledge.

In order to make the program as comprehensive as possible, TECH has brought together leading professionals in pediatric neurology to develop all the contents on the program. Thanks to their scientific perspective and practical experience in a wide range of cases, the teaching content benefits from a perspective that will be highly effective when dealing with Epileptic Syndromes, Paroxysmal Disorders and Demyelinating Diseases.

All this in a 100% online course, which does not require any kind of physical attendance on the part of specialists. Without fixed schedules or classes, there is total flexibility to take the course and students can adjust the pace of study to their own personal or professional needs. All the teaching material can be downloaded from any device with an Internet connection, which enables students to study from home or anywhere else through using mobile devices, laptops or tablets.

This **Postgraduate Certificate in Neurological 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 are 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 the self-assessment process can be carried out to improve learning
- ◆ Special emphasis is placed 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



Access to the most modern treatments and prognoses to address conditions such as Guillain Barré syndrome, primary and secondary headaches or febrile seizures”

“ *You can guarantee that the materials used have been prepared by experts who are aware of the latest developments and who know what you need to continue your professional improvement*”

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.

Rely on the most effective teaching methodology on the academic scene, where you will get the most out of all the time you dedicate to studying

Apply the most advanced clinical diagnostic and imaging techniques to your daily practice



02 Objectives

The program's primary objective is to provide specialists with thorough, comprehensive and up-to-date knowledge on the most common neurological pathologies in the pediatric setting. This involves a review of various conditions such as acute encephalitis or hypotonia in infants, ensuring that the series of objectives set out by TECH are met and that specialists can update their knowledge effectively.





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You are guaranteed to get up to speed with the best available knowledge on neurological pathologies in hospital pediatrics”



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

- ◆ Develop the diagnostic approach and practical aspects of antiepileptic drugs, as well as the diagnostic approach to hypotonic infants and the most frequent conditions such as headaches, or acute conditions such as ataxia, pediatric stroke, or demyelinating diseases, among others

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You will quickly and efficiently achieve your goals with first-class technical and academic support”

03

Course Management

TECH relies on the best professionals in each area to design our programs. This Postgraduate Certificate brings together distinguished pediatric specialists in the area of neurology, adding practical nuance to all the contents in order to make them as effective as possible. This means specialists will have access to both the most recent research in neurological pathologies and the most effective proven practical methodology.





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You will be supported by specialists who know the daily reality of the neurological approach to the most complex pathologies, making them ideal guides for your learning process”

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. Rekarte García, Saray

- ♦ Ramón y Cajal University Hospital Area Specialist Physician in Pediatrics and Specialized Areas Neuropediatrician
- ♦ Infanta Cristina Hospital Area Specialist Physician in Pediatrics and Specialized Areas Neuropediatrician
- ♦ Sanitas La Moraleja University Hospital Area Specialist Physician in Pediatrics and Specialized Areas Neuropediatrician
- ♦ Area Specialist Physician in Pediatrics and Specialized Areas Neuropediatrician, Sanitas Centro Milenium, Costa Rica
- ♦ Degree in Medicine from the University of Oviedo
- ♦ Resident Intern in Pediatrics and Specialized Areas at Asturias Central University Hospital
- ♦ Master's Degree in Pediatric Neurology and Neurodevelopment Cardenal Herrera University
- ♦ Postgraduate Diploma in Advances in Motor and Paroxysmal Disorders in Pediatric Neurology, Cardenal Herrera University

Dr. Buenache Espartosa, Raquel

- ♦ Specialist Physician in Pediatrics and Specialized Areas with a focus on Neuropediatrics Ramón y Cajal University Hospital, Neuropediatrics Profile
- ♦ Specialist Physician in Pediatrics and Specialized Areas Alcorcón Foundation University Hospital
- ♦ Resident Doctor in Pediatrics and Specialized Areas Ramón y Cajal University Hospital
- ♦ Associate Specialist Physician in Pediatrics and Specialized Areas Henares University Hospital, Neuropediatrics Profile
- ♦ Specialist Physician in Neuropediatrics, La Zarzuela Hospital
- ♦ Degree in Medicine and Surgery Autonomous University of Madrid
- ♦ Specialist in Pediatrics and Specialized Areas MIR training at Ramón y Cajal University Hospital, Subspecialization in Neuropediatrics
- ♦ Doctorate Studies Diploma in Advanced Doctoral Studies, which accredits research proficiency, with a qualification of outstanding in the area of Pediatrics in the doctoral program Medical Specialties at the University of Alcalá

04

Structure and Content

TECH prepares and structures its contents to seek maximum efficiency for the specialists who take the course. That's why we use the latest educational technology available, as well as the Relearning teaching methodology in which TECH is a pioneer. Thanks to this method, the hours invested into studying are minimized, allowing students to make the most of all the scientific findings, theses and practical exercises.



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Thanks to the wealth of supplementary readings and video summaries provided by the professors themselves, you will be able to get up to speed much more quickly and efficiently”

Module 1. Neurological Disorders in Pediatrics

- 1.1. Febrile and Parainfectious Crises
 - 1.1.1. Febrile Crises
 - 1.1.2. Epidemiology
 - 1.1.3. Etiology
 - 1.1.4. Clinical Symptoms
 - 1.1.5. Diagnosis
 - 1.1.6. Treatment
 - 1.1.7. Prognosis
- 1.2. Epileptic Syndromes in Pediatric Patients: Practical Considerations in Antiepileptic Drug Management
 - 1.2.1. Epileptic Syndromes Classification and Diagnostic Approach
 - 1.2.2. Epileptic Syndromes in Infants and Preschoolers
 - 1.2.3. Epileptic Syndromes in School Children and Adolescents
 - 1.2.4. Practical Considerations in Antiepileptic Drug Management
- 1.3. Non-Epileptic Paroxysmal Disorders
 - 1.3.1. Non-Epileptic Paroxysmal Disorders
 - 1.3.2. Clinical and Etiological Characteristics
 - 1.3.3. Differential Diagnosis: Epileptic Seizures
- 1.4. Infant Hypotonia and the Most Common Neuromuscular Disorders in Infancy
 - 1.4.1. Non-Paralytic or Central Hypotonia in Infants
 - 1.4.2. Paralytic or Peripheral Hypotonia in Infants
 - 1.4.3. Most Common Neuromuscular Disorders in Childhood: Spinal Muscular Atrophy, Hereditary Sensory-Motor Neuropathies, Myasthenias, Infantile Botulism and Myopathies
- 1.5. Guillain-Barré Syndrome
 - 1.5.1. Guillain-Barré Syndrome and Classification
 - 1.5.2. Pathophysiology
 - 1.5.3. Clinical Symptoms
 - 1.5.4. Diagnostic Criteria
 - 1.5.5. Treatment
 - 1.5.6. Prognosis





- 1.6. Headaches
 - 1.6.1. Headaches
 - 1.6.2. Etiology
 - 1.6.3. Classification: Primary and Secondary Headaches: Migraines, Tension and Trigemino-Autonomic Headaches, and Others
 - 1.6.4. Anamnesis and Physical Examination
 - 1.6.5. Admission Criteria and Warning Signs
 - 1.6.6. Complementary Evaluations
 - 1.6.7. In-hospital Migraine Management
 - 1.6.8. Acute and Chronic Treatment
- 1.7. Acute Ataxia
 - 1.7.1. Vestibular Ataxia and Cerebellar Ataxia
 - 1.7.2. Main Etiologic Differential Diagnosis in Children Admitted for Acute Ataxia Episodes
 - 1.7.3. Practical Management Protocols
- 1.8. Pediatric Stroke
 - 1.8.1. Epidemiology: Etiology and Risk Factors
 - 1.8.2. Pediatric Stroke Clinical Manifestations
 - 1.8.3. *Stroke Mimics*
 - 1.8.4. Pediatric Stroke Code Protocol and Hospital Diagnostic Approach
- 1.9. Acute Encephalitis
 - 1.9.1. Acute Encephalitis / Encephalopathy and Classification
 - 1.9.2. Infectious Encephalitis / Meningoencephalitis
 - 1.9.3. Immune-Mediated Encephalitis
 - 1.9.4. Toxic-Metabolic Encephalitis
- 1.10. Demyelinating Diseases:
 - 1.10.1. Acute Demyelinating Injuries in Pediatrics
 - 1.10.2. Acute Disseminated Encephalomyelitis
 - 1.10.3. Multiple Sclerosis in Childhood: Diagnostic Criteria Initial Therapeutic Approach

05

Methodology

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

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



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

At TECH we use the Case Method

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

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



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

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

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

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



Relearning Methodology

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

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

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



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

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

Relearning will allow you to learn with less effort and better performance, involving you more in your 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 Neurological 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 Technological University.



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

This **Postgraduate Certificate in Neurological Pathology in Hospital Pediatrics** contains the most complete and up-to-date program on the market.

After the student has passed the assessments, they will receive their corresponding **Postgraduate Certificate** issued by **TECH Technological University** via tracked delivery*.

The certificate issued by **TECH Technological University** will reflect the qualification obtained in the Postgraduate Certificate, and meets the requirements commonly demanded by labor exchanges, competitive examinations and professional career evaluation committees.

Title: **Postgraduate Certificate in Neurological Pathology in Hospital Pediatrics**

Official N° of Hours: **150 h.**



*Apostille Convention. In the event that the student wishes to have their paper certificate issued with an apostille, TECH EDUCATION 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 quality
development languages
virtual classroom



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