

Internship Program Pediatric Neurology and Neurodevelopment



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Internship Program
Pediatric Neurology
and Neurodevelopment

Index

01

Introduction

p. 4

02

Why Study an
Internship Program?

p. 6

03

Objectives

p. 8

04

Educational Plan

p. 10

05

Where Can I Do the
Internship Program?

p. 12

06

General Conditions

p. 14

07

Certificate

p. 16

01 Introduction

Nowadays, the constant scientific and technological advances have turned Pediatric Neurology into one of the most innovative medical disciplines. This is evidenced by the numerous devices and surgical procedures recently implemented for the diagnosis and treatment of various brain disorders. Keeping up to date with all these advances and their applications can be complex for the specialist, especially when academic programs with a strong theoretical tone prevail. Therefore, this qualification is ideal for neuro-pediatricians who wish to update their skills from a practical point of view. This program consists of a face-to-face and intensive stay in a reference hospital institution, where the professional will exercise the latest care trends with the accompaniment of great experts.



With this innovative practical learning modality, you will incorporate to your professional practice the most advanced strategies for the approach of infectious, inflammatory and/or autoimmune diseases of the infant nervous system"





Until a few years ago, diseases such as epilepsy, hydrocephalus or infantile cerebral palsy were crippling for the pediatric patient who suffered from them. However, current scientific and technological advances have made all these pathologies more manageable, providing the child with a better quality of life. Another proof of this are the discoveries related to infectious, inflammatory and/or autoimmune diseases of the nervous system. From sophisticated strategies of recent implementation, pharmacological procedures and other therapeutic alternatives have been found to counter these conditions. Moreover, in the surgical field, there are now much more efficient strategies that favor the preservation of brain tissue through implants and other devices.

At the same time, neuro-pediatricians are not always aware of how to apply these new advantages because, in the educational market, programs with a high theoretical load prevail. However, TECH wants to set itself apart from other qualifications by offering the specialist a new academic modality.

This is how this Internship Program in Pediatric Neurology and Neurodevelopment arises, based on a 3-week intensive face-to-face stay. During this learning process, the health professional will move to a medical facility, specialized in this health discipline and equipped with the latest technological and clinical resources. In addition, specialists have the opportunity to choose the facility that best suits their geographic location and pedagogical improvement interests.

Throughout the program, TECH will provide the student with the advice of an assistant tutor. This figure has been appointed to accompany the student in the development of practical skills and to incorporate the most avant-garde procedures of the moment into their practice. In addition, the neuro-pediatrician will have the opportunity to work and dialogue with other experts in order to gather as much experience as possible.

02

Why Study an Internship Program?

In the last decades, medical advances have made possible a better approach to neuropathies that occur in the pediatric age. From this link, new surgical techniques, pharmacological procedures and more comprehensive and efficient clinical care trends have emerged for neuromuscular disorders, hydrocephalus, epilepsy, among others. TECH, in its eagerness to support the neurologist in their practical update on these topics, has designed this very complete degree. Composed of a face-to-face and intensive stay, it will bring the specialist closer to the most rigorous environments, equipped with state-of-the-art technologies, and which have the best experts in the sector.



TECH offers intensive training in which you will have access to clinical institutions of international reference"

1. Updating from the Latest Technology Available

To counteract brain disorders such as Epilepsy or Hydrocephalus, Pediatric Neurology has incorporated new technological tools of greater scope. Likewise, it has implemented non-invasive therapies, based on modern devices, such as magnetic neuro-stimulation. Also, other advanced diagnostic resources have been implemented. All of them will be available to the specialist through this innovative intensive classroom program.

2. Gaining In-depth Knowledge from the Experience of Top Specialists

The development of this qualification will take place in prestigious institutions that, in turn, have an excellent staff of experts. The neurologist will have the opportunity to work directly with them in the management of real patients. From their excellent guidance, they will acquire new experiences based on the protocols and tools generated by the latest scientific evidence in this health field.

3. Entering First-Class Clinical Environments

After a careful selection, TECH has chosen for this program centers with a long trajectory in the approach to pediatric neuro-pathologies and neurodevelopmental problems. These instances have been pioneers in the use of technological resources and care methodologies typical of the current context of this branch of medicine. Therefore, they are ideal facilities for neurologists to acquire practical skills essential for the evolution of their professional practice.



4. Putting the acquired knowledge into daily practice from the very first moment

In an academic scenario where there are many programs on Pediatric Neurology with a high theoretical load, TECH distinguishes itself with a 100% face-to-face and practical learning proposal. Therefore, this clinical stay has been designed for the specialist to update their skills from the first day, addressing real cases, and complete the development of their new skills in just 3 weeks.

5. Expanding the Boundaries of Knowledge

This Internship Program offers the specialist the opportunity to access institutions located in different geographical locations. This strategy is further proof of TECH's ability to adapt to the needs of its graduates and their interest in expanding the frontiers of their knowledge through this intensive face-to-face training.



You will have full practical immersion at the center of your choice"

03 Objectives

As a central goal, this qualification aims for its graduates to develop various practical skills for the management of children's neurological pathologies, directly and through the clinical care of real patients. For this reason, it allocates 3 weeks of intensive and immersive face-to-face stay to the approach of the main instruments and techniques that are now implemented in this specialty, from a hospital center of maximum prestige and rigor.



General Objectives

- Update specialist knowledge in the different syndromic disorders in this discipline through evidence-based medicine
- Promote work strategies based on a comprehensive approach and multidisciplinary care in the patient's social environment that become a reference model for achieving excellence in care
- Encourage the acquisition of technical skills and abilities, through a powerful audiovisual system, and the possibility of development through online simulation workshops and/or specific training
- Encourage professional stimulation through continuous education and research





Specific Objectives

- ◆ Perform a correct anamnesis in pediatric neurology
- ◆ Apply neurological assessment scales
- ◆ Explain the procedure for neurological examination of newborns and infants
- ◆ Identify the clinical neurological examinations performed in newborns and in children up to one year of age
- ◆ Conduct psychomotor developmental assessment in a thorough and rigorous manner
- ◆ Recognize warning signs in the evaluation of psychomotor development
- ◆ To develop genetic and biochemical studies for the identification of the main congenital diseases
- ◆ Examine metabolism of the patients and identify their deficiencies
- ◆ Describe the application of diagnostic imaging in neurodevelopmental assessment and neuropathology
- ◆ Define the correct neuropsychological examination for school children
- ◆ Explain the use of neurophysiological studies in the diagnosis and evaluation in neuropediatrics
- ◆ Correct interpretation of the Electroencephalogram and Electroneurogram in the field of Neuropediatrics
- ◆ Implement visual, trunk and somatosensory potentials for neuropediatric assessment
- ◆ Address congenital bacterial infections that can cause neurological and neurodevelopmental involvement
- ◆ Master the causes of neurological involvement when related to congenital viral infections
- ◆ Determine the main central nervous system abnormalities
- ◆ Identify the etiology and risk factors of cerebral palsy
- ◆ Understand the consequences of aminoacidopathies and organic acidemias In Neuropediatrics
- ◆ Describe the symptoms, diagnosis and treatment of psychomotor developmental delay and mental retardation
- ◆ Explain Juvenile Myasthenia Gravis and other neuromuscular junction disorders
- ◆ Recognize the main disorders that occur in child patients and analyze their derivations
- ◆ Delve into neurophthalmology, neurotology and nutrition and their direct impact on the patient
- ◆ Define the diagnosis and treatment of learning disorders
- ◆ Classify Primary Tumors of the Nervous System and their treatments
- ◆ Explain the treatment of Primary Tumors in the Nervous System
- ◆ Manage nutritional recommendations in neurological disorders
- ◆ Assessing the symptomatology and appropriate treatment for children with bowel and bladder control disorders
- ◆ Diagnosing sleep disorders in children and teenagers
- ◆ Describe epilepsy according to the stages of child development
- ◆ Explain the diagnosis and appropriate treatment of childhood headaches
- ◆ Distinguish the Differentiate meningeal syndromes and define how they should be approached and treated

04 Educational Plan

This Internship Program is a unique opportunity to obtain a complete update in Pediatric Neurology and Neurodevelopment in a hospital facility of international prestige. The study program, 100% face-to-face, intensive and immersive, will be extended for 3 weeks, facilitating the physician's access to the most advanced diagnostic equipment and therapeutic resources in this health area.

From the very first moment, the specialist will offer first-level care to real patients, under the close supervision and personalized guidance of an assistant tutor, who will be in charge of assessing their progress. Other experts with extensive experience will also be available for consultations and doubts during the clinical stay.

In this completely practical Internship Program, the activities are aimed at developing and perfecting the skills necessary to provide healthcare in areas and conditions that require highly qualified professionals, and are oriented towards specific expertise for practicing the activity, in a safe environment for the patient and with highly professional performance.

The practical education will be carried out with the active participation of the student performing the activities and procedures of each area of competence (learning to learn and learning to do), with the accompaniment and guidance of teachers and other fellow trainees who facilitate teamwork and multidisciplinary integration as transversal competencies for the practice of medicine (learning to be and learning to relate).



The procedures described below will form the basis of the practical part of the training, and their implementation is subject to both the suitability of the patients and the availability of the center and its workload, with the proposed activities being as follows:

Module	Practical Activity
Trends in Prenatal and Neonatal Neurology	Assessing the infant's alertness, sensitivity to the environment, and orientation to sensory input to determine global brain activity
	Examine cranial nerves to measure brainstem and cranial nerve development
	Measure posture, sound, deep tendon reflexes and intensity to understand motor system function
	To observe generalized movements and assess primitive reflexes as evidence of adequate global coordination in the newborn
Diagnostic Methods in Pediatric Neurology	Perform studies of the nerve cells that control movement using Electromyography tests
	To assess the sensory pathways and brain response to visual, auditory or tactile electrical stimuli by means of Evoked Potentials
	Detect changes in activity, typical of epilepsy or other seizure disorders, through electroencephalography
	Identify abnormal neurological structures by means of interventional studies such as intraoperative neurophysiological monitoring
Advances in the treatment of neuromuscular diseases of the pediatric age	Implement, in the pediatric patient with Duchenne muscular dystrophy, the early use of tibio-peroneal orthoses for nocturnal use to prevent clubfoot, and later ischio-foot orthoses to maintain gait
	Treat with hyperimmune immunoglobulin and plasmapheresis the pathology Acute Inflammatory Demyelinating Polyneuropathy or Guillain Barré Syndrome
	To strengthen the proximal musculature of the pediatric patient and prevent contractures typical of neuropathies by means of Kinesitherapy

Module	Practical Activity
in Infectious, Parainfectious, Inflammatory and/or Autoimmune Diseases of the Nervous System Infant	Early identification and treatment of sequelae of bacterial meningitis, such as Hearing Loss
	Shortening the duration of symptoms of acute disseminated encephalomyelitis by means of pharmacological therapies with corticosteroids
	Follow up children recovering from acute post-infectious Cerebellitis to prevent the development of acute Ataxia
	Differentiate, based on the latest scientific evidence, the different parasites that cause encephalopathies and other infections of the central nervous system
News in the Handling of Neurodevelopment Disorders	Apply neurorehabilitation of fine and gross motor skills in children with learning disabilities and ADHD
	Treating the child with Autism Spectrum Disorders using Occupational Therapy techniques
	Manage the latest pharmacological recommendations for the approach to different Neurodevelopmental different neurodevelopmental disorders
Advances in Pediatric Neurosurgery	Surgically implanting vagus nerve stimulators for various types of seizures and neurological disorders
	Diversion of cerebrospinal fluid from the brain or spinal canal by means of specific procedures to treat inflammations infections and other brain pathologies
	To develop surgical dorsal rhizotomy in children with cerebral palsy and leg spasticity and spasticity in the legs
	To perform endoscopic third ventriculostomy of the third ventricle in children with Hydrocephalus
	Focalize areas of the brain where seizures originate and implant similar receptive neurostimulation devices similar to pacemakers

05 Where Can I Do the Internship Program?

This qualification will take place in a fully face-to-face manner. For this purpose, TECH has coordinated first level clinical practices in prestigious hospital institutions with a distinguished track record in the management of pediatric neuropathies and neurodevelopmental disorders. In these centers, the physician will update his skills alongside renowned experts who will train him in the management of the most modern surgical tools and non-invasive procedures.




Do your practical training in a prestigious health institution, equipped with the most modern resources to implement state-of-the-art diagnostic procedures and treatments in Pediatric Neurology"





The student will be able to do this program at the following centers:



Medicine

Hospital Maternidad HM Belén


Country	City
Spain	La Coruña

Address: R. Filantropía, 3, 15011, A Coruña

Network of private clinics, hospitals and specialized centers distributed throughout Spain.

Related internship programs:

- Update in Assisted Reproduction
- Hospitals and Health Services Management



Medicine

Hospital HM Montepíncipe


Country	City
Spain	Madrid

Address: Av. de Montepíncipe, 25, 28660, Boadilla del Monte, Madrid

Network of private clinics, hospitals and specialized centers distributed throughout Spain.

Related internship programs:

- Palliative Care
- Aesthetic Medicine



Medicine

Hospital HM Torrelodones


Country	City
Spain	Madrid

Address: Av. Castillo Olivares, s/n, 28250, Torrelodones, Madrid

Network of private clinics, hospitals and specialized centers distributed throughout Spain.

Related internship programs:

- Anaesthesiology and Resuscitation
- Palliative Care



Medicine

Hospital HM Sanchinarro


Country	City
Spain	Madrid

Address: Calle de Oña, 10, 28050, Madrid

Network of private clinics, hospitals and specialized centers distributed throughout Spain.

Related internship programs:

- Anaesthesiology and Resuscitation
- Palliative Care



Medicine

Policlínico HM Sanchinarro

Country	City
Spain	Madrid

Address: Av. de Manteras, 10, 28050, Madrid

Network of private clinics, hospitals and specialized centers distributed throughout Spain.

Related internship programs:

- Gynecological Care for Midwives
- Nursing in the Digestive Tract Department

06

General Conditions

Civil Liability Insurance

This institution's main concern is to guarantee the safety of the trainees and other collaborating agents involved in the internship process at the company. Among the measures dedicated to achieve this is the response to any incident that may occur during the entire teaching-learning process.

To this end, this entity commits to purchasing a civil liability insurance policy to cover any eventuality that may arise during the course of the internship at the center.

This liability policy for interns will have broad coverage and will be taken out prior to the start of the practical training period. That way professionals will not have to worry in case of having to face an unexpected situation and will be covered until the end of the internship program at the center.



General Conditions of the Internship Program

The general terms and conditions of the internship agreement for the program are as follows:

1. TUTOR: During the Internship Program, students will be assigned with two tutors who will accompany them throughout the process, answering any doubts and questions that may arise. On the one hand, there will be a professional tutor belonging to the internship center who will have the purpose of guiding and supporting the student at all times. On the other hand, they will also be assigned with an academic tutor, whose mission will be to coordinate and help the students during the whole process, solving doubts and facilitating everything they may need. In this way, the student will be accompanied and will be able to discuss any doubts that may arise, both clinical and academic.

2. DURATION: The internship program will have a duration of three continuous weeks, in 8-hour days, 5 days a week. The days of attendance and the schedule will be the responsibility of the center and the professional will be informed well in advance so that they can make the appropriate arrangements.

3. ABSENCE: If the students does not show up on the start date of the Internship Program, they will lose the right to it, without the possibility of reimbursement or change of dates. Absence for more than two days from the internship, without justification or a medical reason, will result in the professional's withdrawal from the internship, therefore, automatic termination of the internship. Any problems that may arise during the course of the internship must be urgently reported to the academic tutor.

4. CERTIFICATION: Professionals who pass the Internship Program will receive a certificate accrediting their stay at the center.

5. EMPLOYMENT RELATIONSHIP: The Internship Program shall not constitute an employment relationship of any kind.

6. PRIOR EDUCATION: Some centers may require a certificate of prior education for the Internship Program. In these cases, it will be necessary to submit it to the TECH internship department so that the assignment of the chosen center can be confirmed.

7. DOES NOT INCLUDE: The Internship Program will not include any element not described in the present conditions. Therefore, it does not include accommodation, transportation to the city where the internship takes place, visas or any other items not listed.

However, students may consult with their academic tutor for any questions or recommendations in this regard. The academic tutor will provide the student with all the necessary information to facilitate the procedures in any case.

07 Certificate

This program will allow you to obtain your **Internship Program diploma in Pediatric Neurology and Neurodevelopment** 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: **Internship Program in Pediatric Neurology and Neurodevelopment**

Duration: **3 weeks**

Attendance: **Monday to Friday, 8-hour consecutive shifts**

Accreditation: **5 ECTS**





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