

# Postgraduate Diploma

Advances in Prenatal and  
Neonatal Neurology and  
Metabolic Errors





## Postgraduate Diploma Advances in Prenatal and Neonatal Neurology and Metabolic Errors

- » Modality: online
- » Duration: 6 months
- » Certificate: TECH Technological University
- » Dedication: 16h/week
- » Schedule: at your own pace
- » Exams: online

Website: [www.techtute.com/us/medicine/postgraduate-diploma/postgraduate-diploma-advances-prenatal-neonatal-neurology-metabolic-errors](http://www.techtute.com/us/medicine/postgraduate-diploma/postgraduate-diploma-advances-prenatal-neonatal-neurology-metabolic-errors)

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# 01

# Introduction

In recent years, advances in Neurology have meant great changes and benefits for the prenatal and neonatal care sectors and in general benefits to pediatrics. However, having such specific branches and such fragile patients within the sector, it is necessary to deepen in each aspect, so it is necessary that the doctor knows and updates their knowledge in the field of neurology in newborn patients.







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*The Postgraduate Diploma in Advances in Prenatal and Neonatal Neurology and Metabolic Errors contains the most complete and up-to-date scientific program on the market” What are you waiting for? Enroll now!”*

General pediatricians cannot encompass the complexity of all pediatric subspecialties. As they progress in their development, each one of them acquires a specific body and entity to become its own specialty.

All this, together with the great diversity and complexity of neurological pathology in the first days of life of the newborn, means that more and more neurology units are needed for the care of the newborn patient.

In general, diseases affecting the nervous system constitute the third part of human pathology by frequency, so it is almost necessary to have a specialist in neurology for the review, care and attention of the newborn.

In this scenario, the position of the neurologist becomes the backbone of care. This makes them in charge and responsible for analyzing the neurological system of the newborn patient, as well as their characteristics and any errors that may occur in their metabolism. The program is 100% online, with audiovisual material and practical exercises.

This **Postgraduate Diploma in Advances in Prenatal and Neonatal Neurology and Metabolic Errors** contains the most complete and up-to-date scientific program on the market. The most important features include:

- ♦ Clinical cases presented by experts in the different specialties. 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
- ♦ Latest developments in Advances in Prenatal and Neonatal Neurology and Metabolic Errors in Pediatrics
- ♦ An algorithm-based interactive learning system for decision-making in the clinical situations presented throughout the course
- ♦ With special emphasis on evidence-based medicine and research methodologies in Advances in Prenatal and Neonatal Neurology and Metabolic Errors in Pediatrics
- ♦ 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 skills in Advances in Prenatal and Neonatal Neurology and Metabolic Errors”*

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*This Postgraduate Diploma may be the best investment you can make when selecting a refresher program, for two reasons: in addition to updating your knowledge in Advances in Prenatal and Neonatal Neurology and Metabolic Errors. In Pediatrics, you will obtain a Postgraduate Diploma from TECH Technological University"*

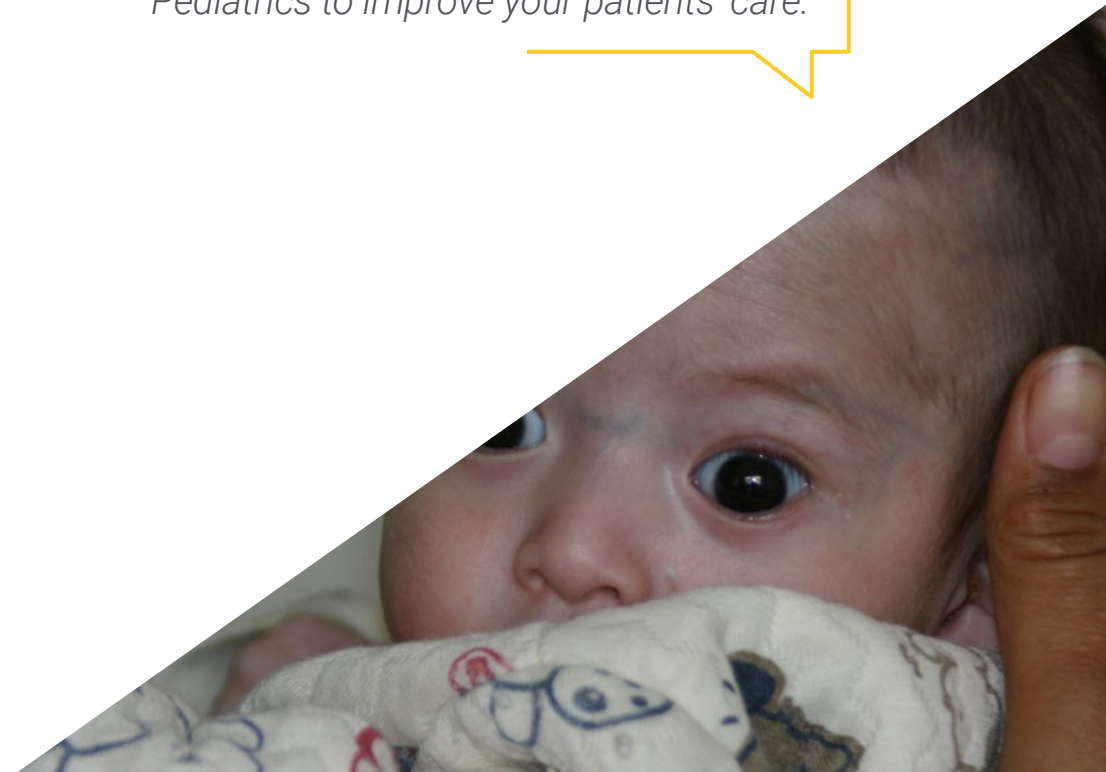
In its teaching staff it includes health professionals belonging to the field of pharmacology, who pour the experience of their work into this training, in addition to recognized specialists belonging to scientific societies of reference.

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

The design of this program is based on Problem-Based Learning, by means of which doctors must try to solve the different professional practice situations that arise throughout the academic year. For this reason, you will be assisted by an innovative, interactive video system created by renowned and experienced experts in the field of pediatric neurology with extensive teaching experience.

*Increase your decision-making confidence by updating your knowledge with this Postgraduate Diploma in Advances in Prenatal and Neonatal Neurology and Metabolic Errors in Pediatrics.*

*Don't miss the opportunity to update your knowledge in Advances in Neonatal Neurology and Metabolic Errors in Pediatrics to improve your patients' care.*





# 02 Objectives

The main objective of the program is the development of both theoretical and practical learning, so that the professional can master the study of Prenatal and Neonatal Neurology in a practical and rigorous way.







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*This refresher program will generate a sense of confidence when practicing medicine and will help you grow both personally and professionally”*



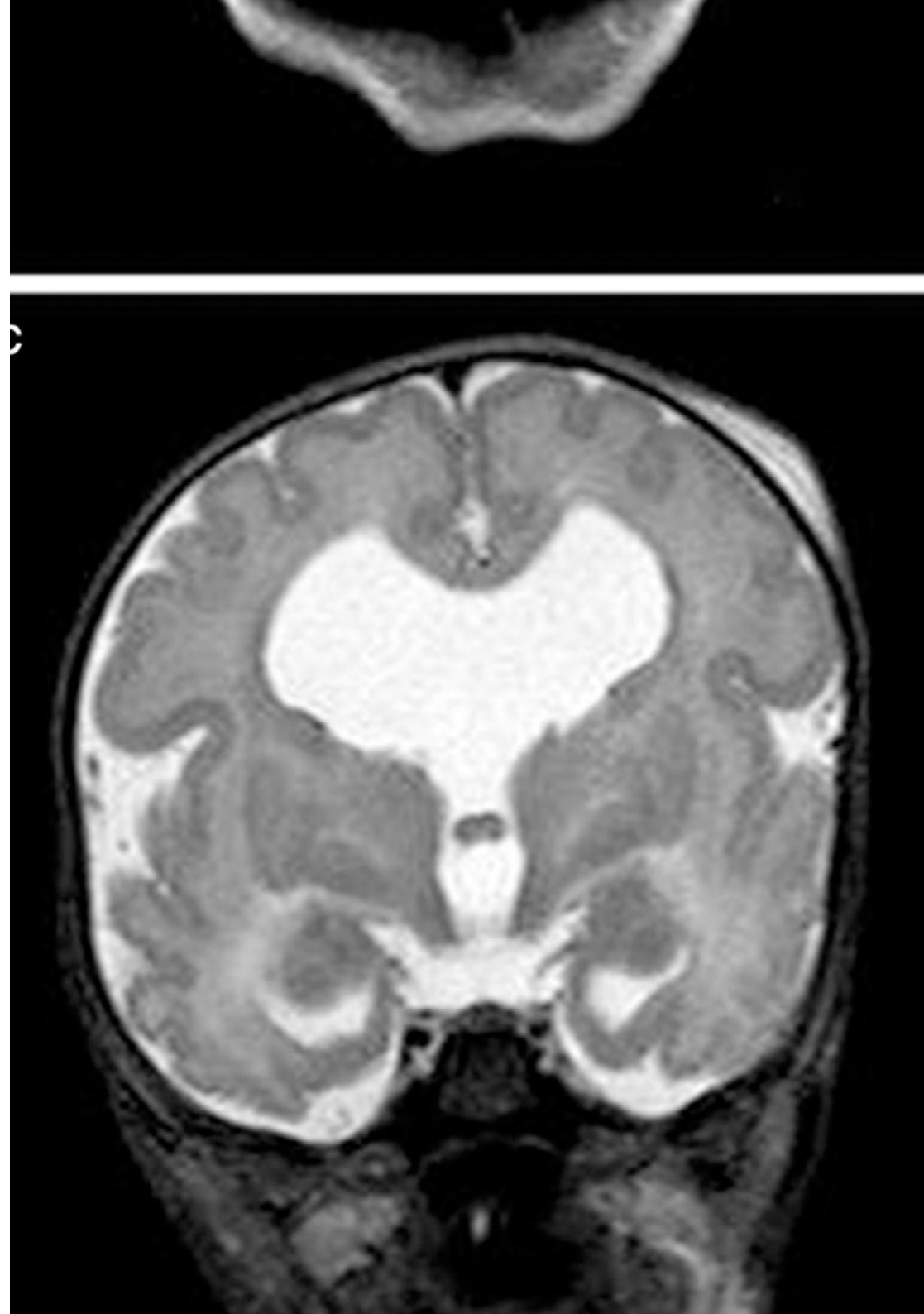
## General Objectives

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- ♦ 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 education
- ♦ Encourage professional stimulation through continuous education and research



*Make the most of the opportunity and take the step to get up to date on the latest developments in Advances in Prenatal and Neonatal Neurology and Metabolic Errors in Pediatrics”*





## Specific Objectives

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### Module 1. Update on Neurology Consultations

- ◆ Perform a correct anamnesis in pediatric neurology
- ◆ Apply neurological assessment scales

### Module 2. Advances in Prenatal and Neonatal Neurology

- ◆ 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

### Module 3. Update on Inborn Errors of Metabolism

- ◆ Explain the usefulness of genetic studies and biochemical studies
- ◆ Identify the main congenital diseases
- ◆ Diagnose the patients' metabolism and identify their deficiencies

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03

# Course Management

This program includes highly regarded health professionals in the field of pediatric cardiology in its teaching staff, who bring the experience of their work to this training.

In addition, renowned specialists, members of prestigious national and international scientific communities, are involved in designing and preparing the program.







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*Learn the latest developments in Advances in Prenatal and Neonatal Neurology and Metabolic Errors in Pediatrics from leading professionals”*

## Management



### Dr. Fernández Fernández, Manuel Antonio

- Director of the Andalusian Institute of Pediatric Neurology. Sevilla, España
- Director of the Pediatric Neurology Area at Hospital San Agustín
- Director of the Pediatric Neurology Area at Hospital Quirónsalud Infanta Luisa
- Accreditation in Neuropediatrics by the Spanish Society of Pediatric Neurology (SENEP)
- Degree in Medicine and Surgery, University of Cadiz
- Master's Degree in Healthcare Services Management and Planning. CTO Business School
- Master's Degree in Entrepreneurship from GADE Business School
- Master's Degree in Leadership and Management Skills from GADE Business School
- Master's Degree in Clinical Trials from the University of Seville
- Member of: Spanish Association of Pediatrics (AEP), Spanish Association for Research on Inborn Errors of Metabolism (AEIEM), Spanish Society of Inborn Errors of Metabolism (AECOM), Spanish Society of Primary Care Pediatrics (SEPEAP), Sociedad Española de Psiquiatría Infantil (SEPI), Sociedad Española de Pediatría Hospitalaria (SEPHO), European Paediatric Academy (EAP), Child Neurology Society (USA), European Pediatric Association (EPA/UNEPSA), World Federation of ADHD Associations (WFDAH), World Federation of ADHD Associations (WFDAH), World Federation of ADHD Associations (WFA)



### Dr. Fernández Jaén, Alberto

- Head of the Child Neurology Department Quirón University Hospital, (Madrid)
- CADE Medical Director
- Degree in Medicine and Surgery
- Specialist in Child Neurology
- Author and contributor in scientific papers

## Professors

### Dr. Hidalgo Vicario, MARÍA Inés

- Medical Specialist in Primary Care Pediatrics at the University Children's Hospital Niño Jesús
- President of the Spanish Society of Adolescent Medicine
- Childcare Physician at the Ministry of Health and Consumer Affairs
- National Member of the Board of Directors of the Spanish Association of Pediatrics
- Doctorate in Medicine from the Autonomous University Madrid

### Dr. Eiris Puñal, Jesús

- Head of the Pediatric Neurology Unit, Santiago de Compostela University Hospital Complex
- Specialist physician at Hospital General de Galicia de Santiago de Compostela
- PhD in Medicine and Surgery from the University of Santiago de Compostela
- Member of: Spanish Society of Pediatrics, Spanish Society of Pediatric Neurology

**Dr. FernándezMayoralas, Daniel Martín**

- ♦ Neuropediatrician at Gandía Hospital
- ♦ Neuropediatrician at La Zarzuela Hospital
- ♦ Assistant Physician, Child Neurology Service, Hospital Universitario Quirónsalud Madrid
- ♦ Author of the book "Specialization in Hearing and Language. *Anatomy, physiology, and neurology of language*
- ♦ PhD in Medicine and Surgery from the University of Murcia
- ♦ Degree in Medicine and Surgery from the Faculty of Medicine of the Murcia University
- ♦ Doctor with a Cum Laude doctoral thesis in Medicine and Surgery from the University of Murcia
- ♦ Master's Degree in Neuropediatrics from the Complutense University of Madrid
- ♦ Member of: The Spanish Society of Pediatric Neurology (SENEP), The Spanish Society of Pediatrics (SEP), The Society of Pediatrics of Madrid and Castilla-La Mancha

**Dr. Amado Puentes, Alfonso**

- ♦ Pediatric Physician at Amado Pediatric Clinic SLP
- ♦ Founder and Physician of La Ruta Azul
- ♦ Faculty Specialist in Neuropediatrics
- ♦ Pediatric Neurologist at the University Hospital Complex of Vigo
- ♦ Degree in Medicine and Surgery from the University of Santiago de Compostela
- ♦ Doctoral Thesis from the University of Santiago de Compostela
- ♦ Diploma of Advanced Studies from the University of Vigo
- ♦ Master in Pediatric Neurology and Neurodevelopment. CEU Cardenal Herrera University

**Dr. Ros Cervera, Gonzalo**

- ♦ Neuropediatrician at IMED Valencia
- ♦ Neuropediatrician at General University Hospital d' Elda
- ♦ Neuropediatrician at Xàtiva Hospital
- ♦ Neuropediatrician at Valencian Institute of Neurosciences(IVANN)
- ♦ Neuropediatrician at Hospital Francesc de Borja
- ♦ Specialist in the Department of Pediatrics at Hospital del Vinalopó
- ♦ Degree in Medicine and Surgery from the University of Valencia
- ♦ Postgraduate Diploma via MIR as a family physician at the University Hospital Vall d'Hebrón
- ♦ Specialization via MIR in Pediatrics and its Specific Areas at the University Hospital La Fe of Valencia
- ♦ Sub-specialization in Neuropediatrics in the Department of Child Neurology at the University Hospital La Fe
- ♦ Training stay at the Neurology Department of the Children's Hospital Sant Joan de Déu in Barcelona
- ♦ International training stay at the Children's Hospital of Sankt Gallen in Switzerland
- ♦ Graduate in Research Sufficiency in the Autonomous University of Barcelona
- ♦ Neuropediatrician accredited by the Spanish Association of Pediatrics

**Dr. Téllez de Meneses Lorenzo, Montserrat Andrea**

- ♦ Pediatric Neurologist specialized in Autism and Communication Disorders
- ♦ Specialist Physician at Hospital Policlínico y Universitario La Fe
- ♦ Pediatric Neurologist in Neural Neurological Rehabilitation Clinics
- ♦ PhD in Medicine and Surgery from the University of Valencia
- ♦ Member of the English Society of Pediatrics





**Dr. Málaga Diéguez, Ignacio**

- ♦ Pediatrician Expert in Neuropediatrics
- ♦ Assistant Physician of the Neuropediatrics Unit at the University Hospital Central de Asturias
- ♦ Neuropediatrician in the Neurological Institute Doctor Mateos
- ♦ Author of publications in national and international scientific journals
- ♦ Professor in undergraduate and postgraduate university studies
- ♦ Doctor of Medicine, University of Oviedo
- ♦ Master's Degree in Child Neurology, University of Barcelona
- ♦ Member of: SENEP, AEP, EPNS, ILAE, SCCALP

**Dr. Gilibert Sánchez, Noelia**

- ♦ Neuropsychologist at Andalusian Institute of Pediatric Neurology
- ♦ Collaborator of the project The Neuropediatrician of Online Consultations
- ♦ Master's in Advanced Studies in Brain and Behavior in the University of Seville
- ♦ Degree in Psychology in the University of Seville

**Dr. Fernández Perrone, Ana Laura**

- ♦ Pediatric Neurology Specialist
- ♦ Pediatric Neurologist at Quirón Salud University Hospital
- ♦ Hospital Complex Ruber Juan Bravo de Quirónsalud
- ♦ Member of the Spanish Society of Neurology

**Dr. Carvalho Gómez, Carla**

- ♦ Specialist in Pediatric Neuropsychology
- ♦ Neuropsychology in the La Fe University Hospital from Valencia
- ♦ Specialist in Neuropsychology at at Virgen de La Macarena University Hospital
- ♦ Professor in Neuropsychology Andalusian Institute of Pediatric Neurology
- ♦ Neuropsychology teacher at the European Institute of Neuropsychology
- ♦ Lecturer in the Master's Degree in Pediatric Neurology and Neurodevelopment from CEU Cardenal Herrera University
- ♦ Degree in Psychology with a Specialization in Neuropsychology from the University of Seville
- ♦ Master's Degree in Advanced Studies in Brain and Behavior by the University of Seville
- ♦ Postgraduate PROFESSIONAL MASTER'S DEGREE in General Health Psychology, University of La Rioja
- ♦ Master's Degree in Functional Criteria Neuropsychology from the Pablo Olavide University

**Dr. Lorenzo Sanz, Gustavo**

- ♦ Head of the Neurodevelopment Unit of Child Neurology at the Ramón y Cajal Hospital in Madrid
- ♦ Associate Professor, University of Alcalá
- ♦ Doctor of Medicine and Surgery
- ♦ Specialist in pediatrics with Accreditation in pediatric Neurology diseases
- ♦ Author of more than 200 research papers in national and international journals
- ♦ Principal investigator and collaborator in numerous internationally funded research projects





**Dr. Barbero Aguirre, Pedro**

- ♦ Pediatric Neurologist Specialized in ADHD
- ♦ Head of the Neurodevelopment Unit at the University Hospital and Polytechnic La Fe
- ♦ Faculty Specialist in Pediatric Neurology at 9 de Octubre Hospital
- ♦ Specialist physician at Casa de Salud Hospital

**Dr. Lefa Sarane, Eddy Ives**

- ♦ Pediatrician Specializing in Child and Adolescent Psychiatry at HM Hospital
- ♦ Pediatrician at HM Nens Hospital
- ♦ Pediatrician in HM Sant Jordi Hospital
- ♦ Lecturer of Master's Degree in Academic Institutions
- ♦ Doctor of Medicine
- ♦ Degree in Medicine and Surgery from the University of Barcelona
- ♦ Master's Degree in Paedopsychiatry and Child and Adolescent Psychology from the Autonomous University of Barcelona.
- ♦ Master's Degree in Neuropediatrics and Neurodevelopment by Cardenal Herrera University
- ♦ Coordinator of the ADHD Working Group of the Spanish Society of Adolescent Medicine (SEMA)
- ♦ Member of: Board of Directors of the Society of Child Psychiatry of the Spanish Association of Pediatrics, Advisory Committee of the Adana Foundation (Insomnia Association for Children, Adolescents and Adults), Pedagogical Committee of the Training Program for the Promotion of Child and Adolescent Mental Health from Pediatrics of the Catalan Institute of Health.

04

# Structure and Content

The content structure has been designed by a team of professionals who recognize the implications of training in the daily medical practice, who are aware of the relevance of current specialization to treat patients with psychiatric pathologies, and who are committed to quality teaching using new educational technologies.





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## Module 1. Update on Neurology Consultations

- 1.1. Medical History in Pediatric Neurology
  - 1.1.1. Clinician Personal Skills
  - 1.1.2. Advantages and Disadvantages of Good Communication and Information
  - 1.1.3. Orientation of the Medical History According to Disorders
    - 1.1.3.1. Headaches
    - 1.1.3.2. Epilepsy
  - 1.1.4. Orientation of the Medical History According to Age
    - 1.1.4.1. Prenatal Medical History
    - 1.1.4.2. Neonatal Medical History
    - 1.1.4.3. Medical History in Young Children
    - 1.1.4.4. Medical History in Older Children
  - 1.1.5. Medical History of Psychomotor Development
  - 1.1.6. Medical History of Language Development
  - 1.1.7. Medical History of the Mother/Father-Child Bond
  - 1.1.8. Personal and Family History
- 1.2. Neurological Examination of Newborns and Infants
  - 1.2.1. Basic Neurological Examination
  - 1.2.2. General Data
  - 1.2.3. External Aspect
  - 1.2.4. Functional Behaviors
  - 1.2.5. Sensory Functions
  - 1.2.6. Motility.
  - 1.2.7. Primary Reflexes and Postural Attitudes
  - 1.2.8. Tone, Hand Pressure and Manipulation
  - 1.2.9. Cranial Nerves
  - 1.2.10. Sensitivity
  - 1.2.11. Neurological Assessment Scales
- 1.3. Neurological Examination of Older Children
- 1.4. Neuropsychological Examination of Preschool Children
  - 1.4.1. The 3 First Years of Life
  - 1.4.2. Development
  - 1.4.3. First Trimester
  - 1.4.4. 3-6 Month Period
  - 1.4.5. 6-9 Month Period
  - 1.4.6. 9-12 Month Period
  - 1.4.7. 12-18 Month Period
  - 1.4.8. 18-24 Month Period
  - 1.4.9. 24-36 Month Period
- 1.5. Neuropsychological Examination of School Children
  - 1.5.1. Evolution from Age 3 to 6
  - 1.5.2. Development
  - 1.5.3. Cognitive Assessment
  - 1.5.4. Language Evaluation
  - 1.5.5. Attention Evaluation
  - 1.5.6. Memory Evaluation
  - 1.5.7. Evaluation of Psychomotor Skills and Rhythm
- 1.6. Psychomotor Development
  - 1.6.1. The Concept of Psychomotor Development
  - 1.6.2. Psychomotor Development Assessment
  - 1.6.3. Warning Signs in Psychomotor Development Evaluation
  - 1.6.4. Psychomotor Development Evaluation Scales
- 1.7. Complementary Evaluations
  - 1.7.1. Prenatal Diagnosis
  - 1.7.2. Genetic Studies
  - 1.7.3. Biochemical Studies
    - 1.7.3.1. Blood
    - 1.7.3.2. Urine
  - 1.7.4. Cerebrospinal Fluid

- 1.7.5. Diagnostic Imaging
  - 1.7.5.1. Ultrasound
  - 1.7.5.2. CAT
  - 1.7.5.3. Magnetic Resonance
  - 1.7.5.4. Positron Emission Tomography (PET)
  - 1.7.5.5. Single Photon Emission Computed Tomography (SPECT)
  - 1.7.5.6. Magnetoencephalography
- 1.7.6. Neurophysiological Studies
  - 1.7.6.1. Electroencephalogram
  - 1.7.6.2. Visual Evoked Potential of the Torso and Somatosensation
  - 1.7.6.3. Electroneurogram (ENG)
  - 1.7.6.4. Electromyogram (EMG)
  - 1.7.6.5. Nerve Conduction Velocity (NCV)
  - 1.7.6.6. Single Fiber Study
- 1.7.7. Neuropathological Studies
- 1.7.8. Neuropsychological Studies

## Module 2. Advances in Prenatal and Neonatal Neurology

- 2.1. Prenatal Central Nervous System Infections
  - 2.1.1. Introduction
  - 2.1.2. General Pathogenic Aspects
  - 2.1.3. Congenital Viral Infections
    - 2.1.3.1. Cytomegalovirus
    - 2.1.3.2. Rubella
    - 2.1.3.3. Herpes
  - 2.1.4. Bacterial Congenital Infections
    - 2.1.4.1. Syphilis
    - 2.1.4.2. Listeria
    - 2.1.4.3. Lyme Disease
  - 2.1.5. Congenital Infections due to Parasites
    - 2.1.5.1. Toxoplasma
  - 2.1.6. Other Infections
- 2.2. Vascular Malformations
  - 2.2.1. Introduction
  - 2.2.2. The Embryonic Process and Its Disorders
  - 2.2.3. Main Central Nervous System Abnormalities
    - 2.2.3.1. Anomalies of Dorsal Induction
    - 2.2.3.2. Anomalies of Ventral Induction
    - 2.2.3.3. Midline Disorders
    - 2.2.3.4. Cell Proliferation-Differentiation Abnormalities
    - 2.2.3.5. Neuronal Migration Abnormalities
    - 2.2.3.6. Posterior Fossa Structure Abnormalities
  - 2.2.4. Embryopathies and Fetopathies
- 2.3. Perinatal Trauma
  - 2.3.1. Perinatal Neurological Trauma
  - 2.3.2. Hypoxic-Ischemic Encephalopathy
    - 2.3.2.1. Concept, Classification and Pathophysiology
    - 2.3.2.2. Detection, Management and Prognosis
    - 2.3.2.3. Newborn Intracranial Hemorrhage
    - 2.3.2.4. Germinal Matrix Hemorrhage-Intraventricular Hemorrhage
    - 2.3.2.5. Periventricular Hemorrhagic Infarction
    - 2.3.2.6. Cerebellar Hemorrhage
    - 2.3.2.7. Supratentorial Hemorrhage
- 2.4. Neonatal Metabolic Disorders with Neurological Effects
  - 2.4.1. Introduction
  - 2.4.2. Neonatal Screening for Inborn Errors of Metabolism
  - 2.4.3. Diagnosis of Metabolic Disease in the Neonatal Period
  - 2.4.4. Neonatal Metabolic Disease with Seizures
  - 2.4.5. Neonatal Metabolic Disease with Neurological Deterioration
  - 2.4.6. Neonatal Metabolic Disease with Hypotonia
  - 2.4.7. Neonatal Metabolic Disease with Dysmorphias
  - 2.4.8. Neonatal Metabolic Disease with Heart Disease
  - 2.4.9. Neonatal Metabolic Disease with Hepatic Symptoms

- 2.5. Neonatal Seizures
  - 2.5.1. Introduction to Neonatal Crises
  - 2.5.2. Etiology and Pathophysiology
  - 2.5.3. Definition and Characteristics of Neonatal Crises
  - 2.5.4. Classification of Neonatal Crises
  - 2.5.5. Clinical Manifestations
  - 2.5.6. Diagnosis of Neonatal Crises
  - 2.5.7. Treatment of Neonatal Crises
  - 2.5.8. Prognosis of Neonatal Crises
- 2.6. Neonatal Intracranial Infections
- 2.7. Newborns at High Neurological Risk
  - 2.7.1. Concept
  - 2.7.2. Causes
  - 2.7.3. Detection
  - 2.7.4. Monitoring

### Module 3. Update on Inborn Errors of Metabolism

- 3.1. Introduction to Inborn Errors of Metabolism (IEM)
  - 3.1.1. Introduction and Concept
  - 3.1.2. Etiology and Classification
  - 3.1.3. Clinical Manifestations
  - 3.1.4. General Diagnostic Process
  - 3.1.5. General Intervention Guidelines
- 3.2. Mitochondrial Diseases
  - 3.2.1. Oxidative Phosphorylation Defects
  - 3.2.2. Krebs Cycle Defect
  - 3.2.3. Etiology and Pathophysiology
  - 3.2.4. Classification
  - 3.2.5. Diagnosis
  - 3.2.6. Treatment

- 3.3. Fatty Acid Beta-Oxidation Defects
  - 3.3.1. Introduction to Beta-oxidation Disorders
  - 3.3.2. Pathophysiology of Beta-oxidation Disorders
  - 3.3.3. Clinical Beta-oxidation Disorders
  - 3.3.4. Diagnosis of Beta-oxidation Disorders
  - 3.3.5. Treatment Beta-oxidation Disorders
- 3.4. Gluconeogenesis Defects
  - 3.4.1. Etiology and Pathophysiology
  - 3.4.2. Classification
  - 3.4.3. Diagnosis
  - 3.4.4. Treatment
- 3.5. Peroxisomal Diseases
  - 3.5.1. Zellweger Syndrome
  - 3.5.2. X-Linked Adrenoleukodystrophy
  - 3.5.3. Other Peroxisomal Diseases
- 3.6. Congenital Disorders of Glycosylation
  - 3.6.1. Etiology and Pathophysiology
  - 3.6.2. Classification
  - 3.6.3. Diagnosis
  - 3.6.4. Treatment
- 3.7. Neurotransmitter IEM
  - 3.7.1. Introduction to Neurotransmitter Metabolic Diseases
  - 3.7.2. General Concepts of Neurotransmitter Metabolic Diseases
  - 3.7.3. GABA Metabolism Disorders
  - 3.7.4. Biogenic Amine Disorder
  - 3.7.5. Startle Disease or Hereditary Hyperekplexia
- 3.8. Creatine Brain Defects
  - 3.8.1. Etiology and Pathophysiology
  - 3.8.2. Classification
  - 3.8.3. Diagnosis
  - 3.8.4. Treatment



- 3.9. Aminoacidopathies
  - 3.9.1. Phenylketonuria
  - 3.9.2. Hyperphenylalaninemia
  - 3.9.3. Tetrahydrobiopterin Deficiency
  - 3.9.4. Non-Ketotic Hyperglycemia
  - 3.9.5. Maple Syrup Urine Disease
  - 3.9.6. Homocystinuria
  - 3.9.7. Tyrosinemia Type II
- 3.10. Purines and Pyrimidines IEM
  - 3.10.1. Etiology and Pathophysiology
  - 3.10.2. Classification
  - 3.10.3. Diagnosis
  - 3.10.4. Treatment
- 3.11. Lysosomal Diseases
  - 3.11.1. Mucopolysaccharidosis
  - 3.11.2. Oligosaccharidosis
  - 3.11.3. Sphingolipidosis
  - 3.11.4. Other Lysosomal Diseases
- 3.12. Glycogenesis
  - 3.12.1. Etiology and Pathophysiology
  - 3.12.2. Classification
  - 3.12.3. Diagnosis
  - 3.12.4. Treatment
- 3.13. Organic Acidemias.
  - 3.13.1. Methylmalonic Acidemia
  - 3.13.2. Propionic Acidemia
  - 3.13.3. Isovaleric Acidemia
  - 3.13.4. Glutaric Aciduria Type I
  - 3.13.5. 3-Methyl Crotonyl Glyciduria
  - 3.13.6. Holocarboxylase Synthetase Deficiency
  - 3.13.7. Biotinidase Deficiency
  - 3.13.8. 3-Methylglutaconyl Aciduria Type I
  - 3.13.9. 3-Methylglutaconyl Aciduria Type III
  - 3.13.10. D-2 Hydroxyglutaric Aciduria
  - 3.13.11. L-2 Hydroxyglutaric Aciduria
  - 3.13.12. 4-Hydroxybutyric Aciduria
  - 3.13.13. Deficiency of Acetoacetyl CoA-Thiolase
- 3.14. Carbohydrates IEM
  - 3.14.1. Etiology and Pathophysiology
  - 3.14.2. Classification
  - 3.14.3. Diagnosis
  - 3.14.4. Treatment



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

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.



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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 specialization, developing a critical mindset, defending arguments, and contrasting opinions: a direct equation to success.*

In our program, learning is not a linear process, but rather a spiral (learn, unlearn, forget, and re-learn). Therefore, we combine each of these elements concentrically.

The overall score obtained by TECH's learning system is 8.01, according to the highest international standards.



This program offers the best educational material, prepared with professionals in mind:



#### Study Material

All teaching material is produced by the specialists who teach the course, specifically for the course, so that the teaching content is 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 Diploma in Advances in Prenatal and Neonatal Neurology and Metabolic Errors. In Pediatrics guarantees students, in addition to the most rigorous and up-to-date education, access to a Postgraduate Diploma issued by TECH Technological University.



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*Successfully complete this program and receive your university qualification without having to travel or fill out laborious paperwork"*

This **Postgraduate Diploma in Advances in Prenatal and Neonatal Neurology and Metabolic Errors** contains the most complete and up-to-date scientific program on the market.

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

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

Title: **Postgraduate Diploma in Advances in Prenatal and Neonatal Neurology and Metabolic Errors**

Official N° of Hours: **500 h.**



\*Apostille Convention. In the event that the student wishes to have their paper diploma issued with an apostille, TECH EDUCATION will make the necessary arrangements to obtain it, at an additional cost.





## Postgraduate Diploma

Advances in Prenatal and Neonatal Neurology and Metabolic Errors

- » Modality: online
- » Duration: 6 months
- » Certificate: TECH Technological University
- » Dedication: 16h/week
- » Schedule: at your own pace
- » Exams: online

# Postgraduate Diploma

Advances in Prenatal and Neonatal  
Neurology and Metabolic Errors

