

Advanced Master's Degree Neurology and Neurodevelopment





Advanced Master's Degree Neurology and Neurodevelopment

Course Modality: Online

Duration: 2 years

Accreditation: TECH Technological University

Official N° of hours: 3,000 h.

Website: www.techtitute.com/medicine/advanced-master-degree/advanced-master-degree-neurology-neurodevelopment

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01 Introduction

The continuous advancements in neurosciences have led to the discovery and diagnosis of previously unknown neurological diseases. This is due to the great commitment to research, which has favored the emergence of more sophisticated technologies. Therefore, with this TECH program we want to offer physicians the most complete training on Neurology and Neurodevelopment, which will allow them to make faster and more accurate diagnoses.





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Knowing about advances in neurology will enable physicians to stay abreast of the latest techniques on offer for the diagnosis of potential neurodevelopmental diseases and prescribe more effective treatments”

Neurological Diagnosis has evolved exponentially in recent decades. The introduction of new and sophisticated technologies applied to this field drives and facilitates the development of research. Keeping up with this unstoppable flow of information can be a daunting task, but it is absolutely necessary. In this comprehensive Advanced Master's Degree, we invite you to the forefront of this specialty where we will bridge the gap between highly specialized fields of Neurology and Neurodevelopment. This is all done thanks to the most complete training on the market, which we have divided into two main blocks of study. On the one hand, Pediatric Neurology and Neurodevelopment, and on the other hand, neurology updates. A way of organizing the information that will make the study of the main novelties in this field much more comprehensible.

It is necessary to understand that general practitioners cannot encompass the complexity of all pediatric subspecialties. As they progress and develop as professionals, each one acquires a specific body of knowledge and chooses their own specialty. In addition, the nuances of child development depending on the age and numerous other factors requires a great deal of specialization on the part of medical professionals working in the field of neurology.

For this very reason, the neurology specialist needs to keep up to date with their area of knowledge, so that they can act efficiently and offer their patients the latest advancements in their clinical practice. However, accessing the latest scientific evidence and keeping up to date with it can be difficult when attempting to balance a professional and personal life, as it requires a level of time and dedication that, on occasions, the specialist does not have.

This Advanced Master's Degree offers the possibility to deepen and update knowledge of this field, with the use of the latest educational technology. It provides a comprehensive overview of Neurology and Neurodevelopment, while focusing on the most important and innovative aspects of treatments in pediatric neurology. All this in a 100% online training, which will allow you to expand your knowledge and, therefore, your professional skills and competencies in a simple way, adapting your study time to the rest of your daily obligations.

This **Advanced Master's Degree in Neurology and Neurodevelopment** contains the most complete and up-to-date program on the market. The most important features include:

- The development of clinical cases presented by experts in Neurology and Neurodevelopment
- 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
- New diagnostic and therapeutic developments in Neurology and Neurodevelopment
- The presentation of hands-on workshops on procedures, diagnostic and therapeutic techniques
- Contains real images in high resolution and practical exercises where the self-evaluation process can be carried out to improve learning
- An algorithm-based interactive learning system for decision-making in the clinical situations presented throughout the course
- Special emphasis on test-based medicine and research methodologies
- 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



This program has been designed for professionals seeking the highest qualification, with the best didactic material, working on real clinical cases and learning from the best professionals in the sector"

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Our Advanced Master's Degree is a unique opportunity to study, the most relevant aspects in Neurology and Neurodevelopment, training you further so as to give your career a boost"

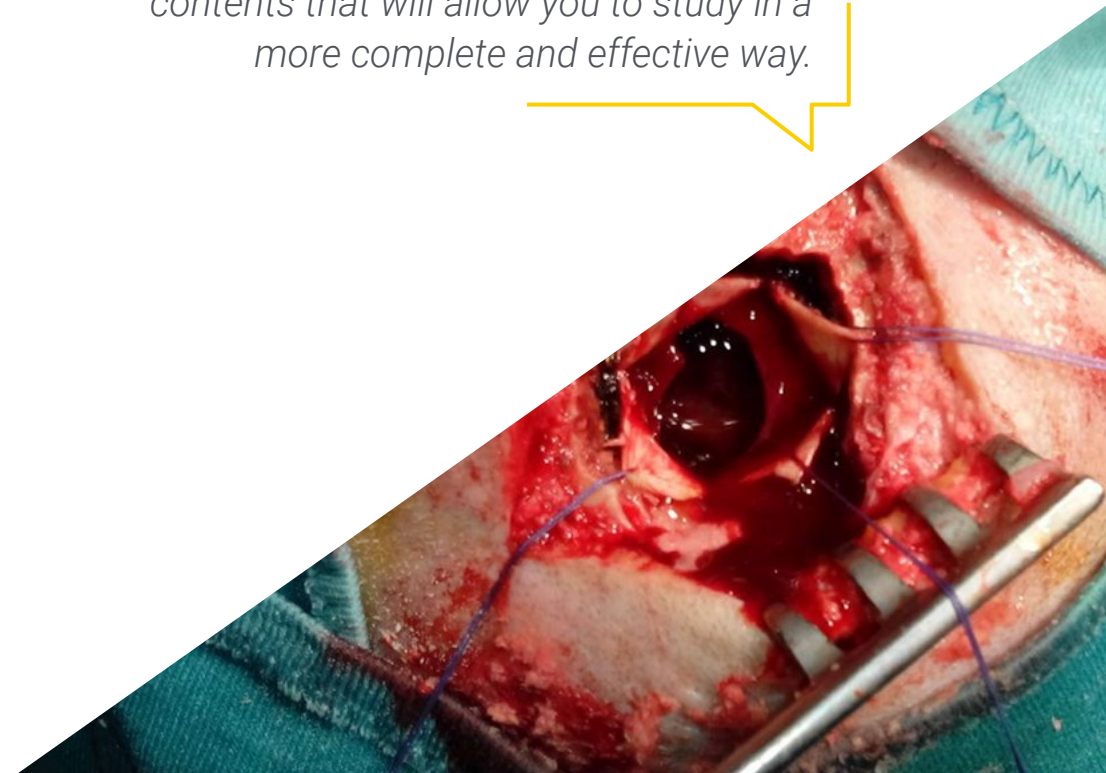
Its teaching staff includes health professionals from the medical field, who contribute their work experience to this training, as well as renowned specialists from leading scientific societies.

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 training program designed to train for real life situations.

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

Increase your decision-making confidence by updating your knowledge through this Advanced Master's Degree, a program created to train the best.

We offer you the best teaching methodology, with a multitude of practical contents that will allow you to study in a more complete and effective way.



02 Objectives

This Advanced Master's Degree in Neurology and Neurodevelopment is oriented towards offering a complete, and detailed up-to-date vision on this subject for physicians working with patients suffering from related disorders. A advanced specialization which offers detailed expertise to professionals.





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This Advanced Master's Degree will allow you to acquire or update your knowledge in Neurology and Neurodevelopment, so that you will be able to offer personalized attention to your patients"



General Objectives

- Update the specialist's knowledge in the different syndromic disorders of this discipline, through evidencebased 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.
- Acquire the neurological knowledge and skills necessary for regular clinical practice in specialized consultation
- Know the latest updates and advances in clinical neurology



Make the most of the opportunity and take the step towards getting up-to-date on the latest developments in Neurology and Neurodevelopment"

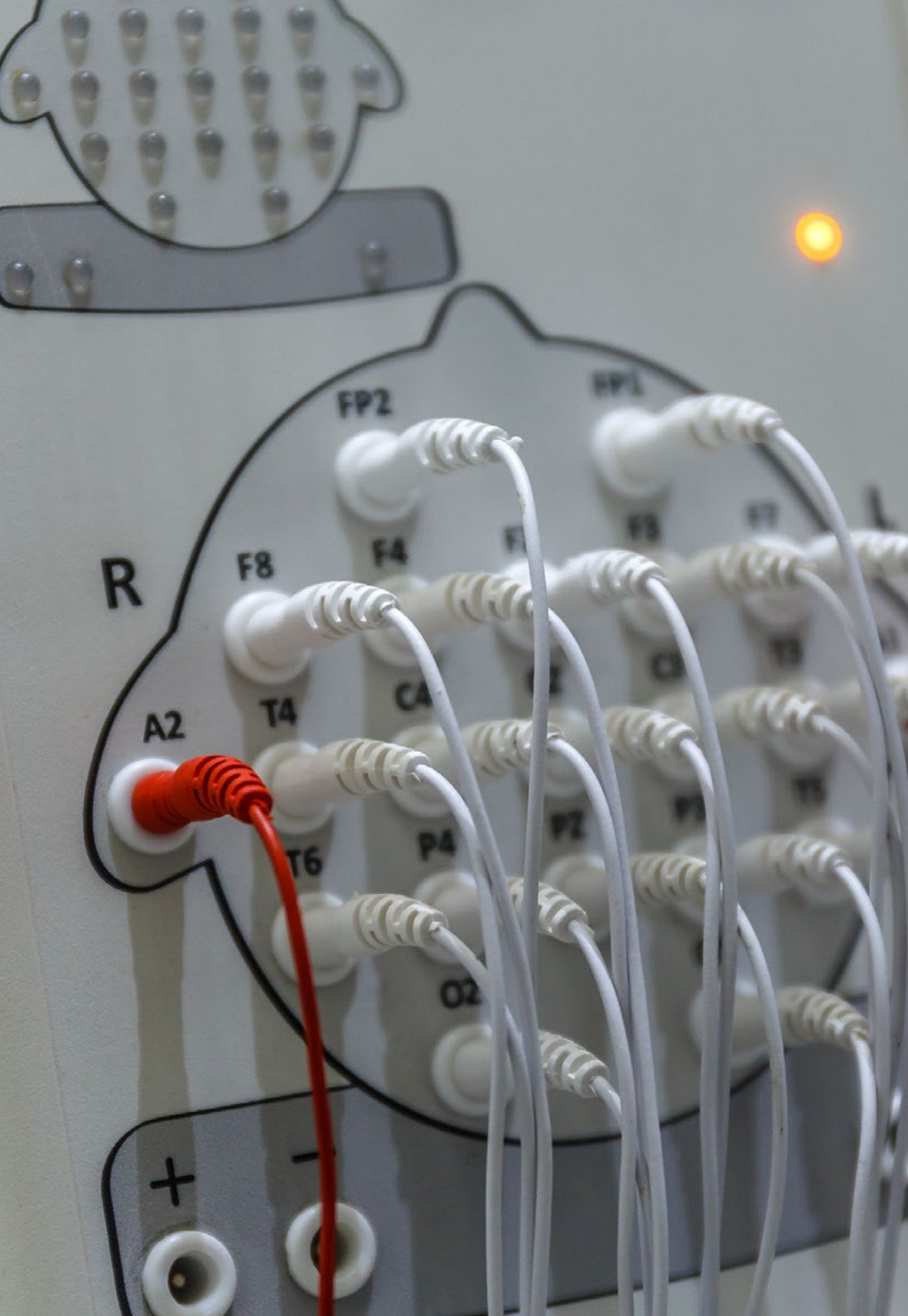




Specific Objectives

- ◆ Perform a correct anamnesis in pediatric neurology
- ◆ Explain the procedure for neurological examination of newborns and infants
- ◆ Define the correct neuropsychological examination for school children
- ◆ Apply neurological assessment scales
- ◆ Explain how to perform psychomotor developmental assessment in a thorough and rigorous manner
- ◆ Identify warning signs in the evaluation of psychomotor development
- ◆ Define the complementary explorations to be applied in prenatal diagnosis
- ◆ Explain the usefulness of genetic studies and biochemical studies
- ◆ Describe the application of diagnostic imaging in neurodevelopmental assessment and neuropathology
- ◆ Explain the use of neurophysiological studies in the diagnosis and evaluation in neuropsychiatry
- ◆ Describe the execution and evaluation of the electroencephalogram
- ◆ Explain the application of visual, truncal and somatosensory evoked potentials in neuropsychiatry
- ◆ Define the application of the Electroneurogram (ENG) in neuropsychiatry
- ◆ Explain the causes of neurological involvement when related to congenital viral infections
- ◆ Describe congenital bacterial infections that can cause neurological and neurodevelopmental involvement
- ◆ Identify congenital parasite infections with neurological repercussions
- ◆ Describe the main central nervous system anomalies
- ◆ Explain the relationship of perinatal neurological trauma to subsequent neurological impairment

- Define the clinical manifestations of inborn errors of metabolism
- Explain the implication of aminoacidopathies and organic acidemias in neuropediatrics.
- Describe the etiology and risk factors of Cerebral Palsy
- Explain Juvenile Myasthenia Gravis and other neuromuscular junction disorders
- Describe the symptoms, diagnosis and treatment of psychomotor developmental delay and mental retardation
- Define the diagnosis and treatment of learning disorders
- Explain the treatment of mood disorders in the pediatric age range
- Describe the symptomatology and appropriate treatment for children with sleep disorders
- Describe Epilepsy according to the stages of child development
- Explain the diagnosis and appropriate treatment of childhood headaches
- Describe the symptomatology and appropriate treatment for children with bowel and bladder control disorders
- Distinguish the different meningeal syndromes and define how they should be approached and treated
- Classification of the primary tumors of the nervous system
- Explain the treatment of primary tumors of the nervous system
- Define nutritional recommendations in neurological disorders
- Know the hierarchical organization of neuroanatomy and neurophysiology in order to facilitate clinical exploration
- Recognize the rigorousness of classical neurological examination procedures
- Recognize syndromic diagnosis as the basis for understanding neurological diseases
- Recognize the limited role of complementary examinations
- Recognize peripheral nerve, neuromuscular plate, and muscle diseases at a general level
- Diagnostic approach to a patient with neuropathic pain, weakness or fatigability
- Diagnose most of the systemic processes that produce peripheral nerve and muscle alterations
- Know the essential diagnostic techniques and realistically assess what can be expected at this level of care
- Efficiently manage prevention protocols and health programs for vascular risk factors
- Distinguish ischemic strokes of cardioembolic etiology from the rest and to learn efficient prophylactic guidelines for oral anticoagulation
- Recognize symptoms, be clear about what to do and, above all, what not to do
- Know the limitations of each level of care and know how to activate a Stroke Code when necessary
- Efficient and, above all, realistic patient follow-up and control of sequelae and cardiovascular risk factors
- Learn about neurodegenerative processes, which are emerging processes in today's society and which in the near future will acquire epidemic proportions, with enormous associated costs
- Have the clinical skills necessary to properly diagnose and manage Alzheimer's and Parkinson's diseases
- Know how to differentiate alzheimer's disease from other dementias
- Know other hypo- or hyperkinetic movement disorders caused by diseases of the basal ganglia, especially dystonias
- Learn that sleep disorders are multidisciplinary in nature and require a cross-cutting approach
- Learn that insomnia is not treated only with "sleeping pills" and, many times, its use is already a problem in itself
- Learn that snoring is a problem that must be carefully assessed to rule out OSAHS
- Learn that stupor and coma are states in which the brain is highly vulnerable
- Perform the correct neurological assessment of polytraumatized patients



- ◆ Recognize the conditions requiring urgent neurosurgery
- ◆ Learn to diagnose malformations and fundamental neurodevelopmental disorders
- ◆ Acquire training and basic skills in the management of neuro-oncological patients
- ◆ Recognize the spatiotemporal symptoms of MS
- ◆ Learn how to clinically diagnose MS and its evolutive forms
- ◆ Acquire skills in the recognition and treatment of relapses
- ◆ Establish Help and Support Guidelines for MS patients
- ◆ Learn about other CNS demyelinating and dysimmune processes
- ◆ Learn how to diagnose a primary headache
- ◆ Recognize the alarm symptoms of a secondary headache
- ◆ Protocolize a realistic step-by-step treatment: abortive crisis and migraine prophylaxis
- ◆ Inform patients about treatments that are not useful or not rigorously proven by evidence-based medicine (fake news, urban legends, fantasy and scientism)
- ◆ Diagnose and treat craniofacial neuralgias
- ◆ Recognize what is and what is not Epilepsy
- ◆ Distinguish between Idiopathic, Cryptogenic, or Secondary Seizures
- ◆ Recognize the most important infectious processes of the CNS and to place them in their context in order to act accordingly
- ◆ Review the major neurotoxic agents to prevent nerve injury with appropriate health programs
- ◆ Review the main neurological manifestations of systemic diseases
- ◆ Know the psychiatric processes associated with neurological diseases
- ◆ Differentiate between simulation and conversion syndrome

03 Skills

After passing the evaluations of the Advanced Master's Degree in Neurology and Neurodevelopment you will have acquired the professional skills necessary to administer a first-rate practice, updated based on the latest scientific evidence, and supported by the largest compendium of knowledge and experience available in the current educational market.





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At the end of this Advanced Master's Degree, the physician will have acquired the necessary skills to act with greater confidence in his daily practice"



Basic Skills

- ♦ Possess and understand knowledge that provides a basis or opportunity to be original in the development and/or application of ideas, often in a research context
- ♦ Apply acquired knowledge and problem-solving skills in new or unfamiliar environments within broader (or multidisciplinary) contexts related to their area of study
- ♦ Integrate knowledge and face the complexity of making judgments based on incomplete or limited information, including reflections on the social and ethical responsibilities linked to the application of their knowledge and judgments
- ♦ Communicate its conclusions – and the ultimate knowledge and rationale behind them to specialized and non-specialized audiences in a clear and unambiguous manner
- ♦ Acquire the learning skills that will enable them to continue studying in a manner that will be largely self-directed or autonomous



*A uniquely specialized program
that will allow you to acquire
advanced training in this field"*





Specific Skills

- ◆ Properly perform neurological screening at all stages of child development.
- ◆ Implement imaging and complementary tests in the appropriate study of child development
- ◆ Identify the involvement of prenatal central nervous system infections
- ◆ Define the implications of fetal malformations on neurodevelopment
- ◆ Define the neurodevelopmental implications of trauma
- ◆ Identify and treat inborn errors of metabolism in the context of neurological pathology
- ◆ Apply the appropriate treatment in the case of central and peripheral motor disorders
- ◆ Define and treat pervasive developmental disorders and autism spectrum disorders
- ◆ Apply appropriate treatment in attention deficit hyperactivity disorder
- ◆ Explain the current approach to paroxysmal disorders in the pediatric age range
- ◆ Define the disorders requiring neurosurgical treatment in pediatric neurology
- ◆ Identify the neurological alterations of the different malformations, chromosomal and other genetic alterations of the central nervous system
- ◆ Define the impact on the development of neurophthalmology and neurotology
- ◆ Apply the appropriate nutritional and pharmacological treatment in Neuropediatrics
- ◆ Address the different neurological emergencies that may occur in the pediatric age range

04

Course Management

The program includes in its teaching staff reference specialists in Neurology and Neurodevelopment, who pour into this training the experience of their work. Additionally, other recognized specialists participate in its design and preparation, which means that the program is developed in an interdisciplinary manner. A teaching staff of specialists chosen for their professional trajectory and teaching capacity that will allow you to learn from the direct experience of the best in the sector.





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A teaching staff trained by the best professionals in the sector, which will allow you to learn from the direct experience of the most reputable specialists in this field"

Management



Dr. Fernández Fernández, Manuel Antonio

- ♦ Degree in Medicine and Surgery
- ♦ Pediatrician
- ♦ Medical Specialist in Child Neurology
- ♦ Director of the Andalusian Institute of Pediatric Neurology. Sevilla, España
- ♦ Accreditation in Neuropediatrics by the Spanish Society of Pediatric Neurology (SENEP)
- ♦ Master's Degree in Healthcare Services Management and Planning. CTO Business School
- ♦ Professional Master's Degree in Entrepreneurship from GADE Business School
- ♦ Master's Degree in Leadership and Management Skills from GADE Business School



Dr. Fernández Jaén, Alberto

- ♦ Degree in Medicine and Surgery
- ♦ Specialist in Child Neurology
- ♦ CADE Medical Director
- ♦ Head of the Child Neurology Department. Quiron University Hospital, Madrid



Dr. Martín Araguz, Antonio

- PhD in Medicine and Surgery
- Medical Specialist in Neurology. Neurological Sciences Unit of Madrid (Spain)
- Expert in the Development of the High Capacities of the Human Brain (National Geographic)
- Doctor in History of Art
- Diploma in Aerospace Medicine
- Master in Astronomy and Astrophysics
- Director of First International Congress about Euroesthetics. Carlos III Research Institute CSIC (Madrid, Spain)



Dr. Pérez Martinez, David Andrés

- President of the Spanish Association of Neurology since 2019.
- Head of Neurology Service at the University Hospital 12 de Octubre since 2015
- Associate Professor, Faculty of Medicine, Complutense University. Since 2012
- Head of Section, Hospital Universitario Infanta Cristina. Since 2018
- FEA Neurology, Hospital Central de la Cruz Roja San José y Santa Adela. Since 2001
- General Director of the Spanish Foundation for Neurological Diseases, 2010- 2016

Professors

Dr. Amado Puentes, Alfonso

- ♦ Pediatric Neurologist
- ♦ Vigo University Hospital Complex. Vigo, Spain

Dr. Barbero Aguirre, Pedro

- ♦ Head of the Neurodevelopment and Pediatric Neurology Unit
- ♦ La Fe Polyclinic and University Hospital. Valencia, Spain

Dr. Carvalho Gómez, Carla

- ♦ Neuropsychologist
- ♦ Andalusian Institute of Pediatric Neurology. Sevilla, España

Dr. Eiris Puñal, Jesús

- ♦ Head of the Pediatric Neurology Unit
- ♦ Santiago de Compostela University Hospital Complex. Galicia, Spain

Dr. Fernández, Ana Laura

- ♦ Child Neurologist
- ♦ Neurology Department
- ♦ Quironsalud University Hospital. Madrid, Spain

Dr. Fernández-Mayoralas, Daniel Martín

- ♦ PhD in Medicine and Surgery from the University of Murcia
- ♦ Neuropediatrician
- ♦ Quironsalud University Hospital, Madrid

Dr. Gilibert Sánchez, Noelia

- ♦ Neuropsychologist
- ♦ Curricular Internship at INANP Andalusian Institute of Pediatric Neurology. Sevilla, España

Dr. Hidalgo Vicario, Inés

- ♦ Primary Care Pediatrics Specialist
- ♦ Coordinator of the training and accreditation group of the SEMA (Spanish Society of Adolescent Medicine). Madrid, Spain

Dr. Lefa S., Eddy

- ♦ Pediatrician Specializing in Child and Adolescent Psychiatry. Barcelona, Spain

Dr. Lorenzo Sanz, Gustavo

- ♦ Head of the Neurodevelopment and Pediatric Neurology Unit
- ♦ Ramón y Cajal Hospital. Madrid, Spain

Dr. Málaga, Ignacio

- ♦ Pediatric Neurologist
- ♦ Asturias Central Hospital. Asturias, Spain

Dr. Ros Cervera, Gonzalo

- ♦ Neuropediatrician
- ♦ Hospital IMED Valencia. Valencia, Spain

Dr. Téllez, Montserrat

- ♦ Pediatric Neurologist
- ♦ La Fe Polyclinic and University Hospital. Valencia, Spain

Dr. Marta Ruiz López

- ♦ Degree in Medicine from the University of Salamanca
- ♦ Specialist in Neurology
- ♦ Master in Movement Disorders. 4th Edition. University of Murcia-Neurocampus-Viguera Publishers
- ♦ Certification in Ultrasonography by the Spanish Society of Neurology.
- ♦ Fellowship by the American Parkinson Foundation for fellowship in Research at International Center (January 2018 - July 2018)
- ♦ Research: Phase 3 Study to Examine the Efficacy, Safety and Tolerability of APL-130277 (Sublingual Apomorphine) for the Acute Treatment of OFF Episodes in Patients with Parkinson's -301. Cynapsus Therapeutics

Dr. Moreno, Irene

- ♦ Clinical Neurologist. Jiménez Díaz Hospital Foundation Hospital. Puerta de Hierro University Hospital.
- ♦ Research Neurologist. Puerta de Hierro - Segovia de Arana Institute for Health Research.
- ♦ Master Neuro-immunology Autonomous University of Barcelona - CEMCAT
- ♦ Doctorate in Neurosciences. Autonomous University of Madrid

Dr. Puente Muñoz, Ana Isabel

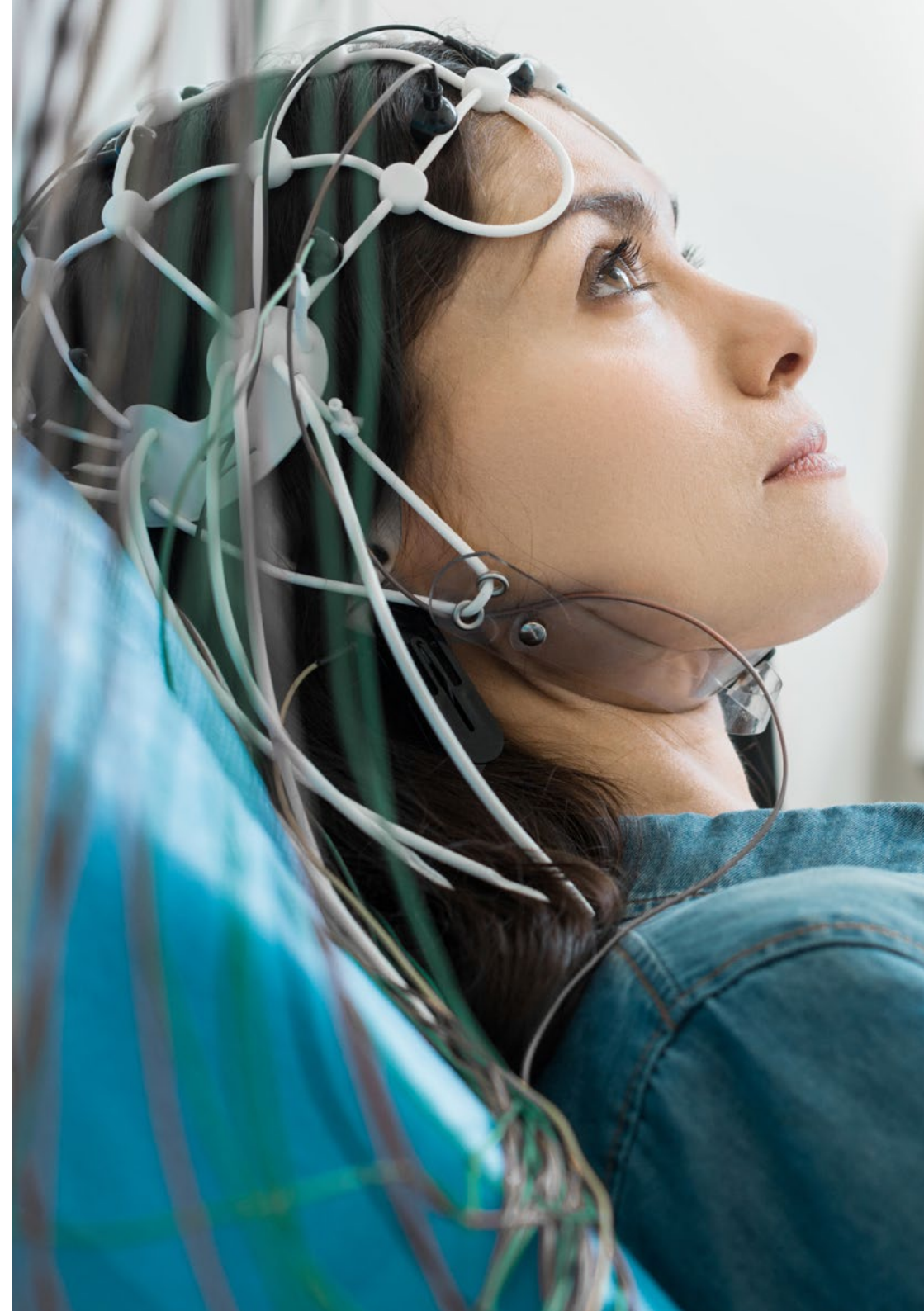
- ♦ Degree in Medicine and Surgery from the Complutense University (1995)
- ♦ Specialist in Clinical Neurophysiology at the Clinical Hospital San Carlos of Madrid (2001)
- ♦ Professional Expert in Computer Tools in Health Research, UNED (2005)
- ♦ Head of the Clinical Neurophysiology Unit at the Central Hospital of the Red Cross in Madrid: June 2005 to Present
- ♦ Director of the sleep disorders area and Community Manager for the web portal www.neurowikia.es Start January-2011 to present
- ♦ Coordinator of the Sleep and Electroencephalography Unit at Quironsalud Sur Hospital: From October 2019 to Present

Dr. De La Morena, Asunción

- ♦ Degree in Medicine and Surgery (1989- 1995) from the Autonomous University of Madrid
- ♦ Doctorate Courses in Neurosciences, Faculty of Medicine, Complutense University of Madrid, completed in 1999 (32 credits), Obtaining the Research Sufficiency.
- ♦ Specialty Neurology via MIR at the University Hospital Clínico San Carlos Madrid, Completing their training on April 30, 2000
- ♦ University Hospital Infanta Cristina Since its Opening. Category: Assistant Medical Specialist Neurology
- ♦ Resident Physician Neurology Date: 1996-2000 Institution: San Carlos Clinical Hospital, Madrid
- ♦ SEN Specific Training Fellow Date: 2001-2002 Institution: Barcelona Clinical Hospital
- ♦ Neurology Area Specialist Date: April-June 2004, January-March 2005 Institution: Clinical Hospital San Carlos de Madrid Date: from October 2007 to May 2008

Dr. Toledo Alfocsa, Daniel

- ♦ Degree in Medicine, Faculty of Medicine, Miguel Hernández University, Alicante, Spain
- ♦ Neurology Specialist (General Neurology Consultation, General Neurology Ward, and Stroke Unit) 12 de Octubre University Hospital, Madrid. October/2018 - Present
- ♦ Neurology Specialist (general Neurology ward and Cognitive Impairment Consultation) Clinical Hospital San Carlos, Madrid. June/2018 - July/2018
- ♦ Resident in Neurology Clinical Hospital San Carlos, Madrid. May/2014 - May/2018
- ♦ Expert Degree in Headaches from the Francisco de Vitoria University. January-September 2020
- ♦ Diagnostic Imaging Simulation Program in Dementia. TMC Academy. March-September 2020
- ♦ First Multidisciplinary Meeting on Headaches of the CAM (San Carlos Clinical University Hospital). 04/06/2018





Dr. Lobato Pérez, Luis

- ♦ Faculty Specialist in Neurology
- ♦ May 2016- May 2020. MIR Residency: La Paz University Hospital. Neurology and Clinical Neurophysiology Service
- ♦ July 2020 - present. General Neurology Consultation. 12 de Octubre University Hospital. Emergency Duty COVID-19
- ♦ May 2018-May 2020. Neurophysiology On-call with Epilepsy Monitoring Unit.
- ♦ March-April 2020. Emergency Department. Pandemic COVID-19
- ♦ May-July 2020. Neuroimmunology Unit. La Paz University Hospital. Neurology Service
- ♦ Epilepsy Monitorization Unit. Comprehensive Epilepsy Center (A. Kanner)
- ♦ January - March 2020. Jackson Memorial Hospital, Miami University Hospital
- ♦ Clinical Collaborator at Teachers Autonomous University of Madrid
- ♦ 2016-2020. La Paz University Hospital. Autonomous University of Madrid

05

Structure and Content

The structure of the contents has been designed by a team of professionals from the best research centers and universities on a national level. Aware of the relevance of current training and the need to support each study and its application on a solid scientific basis, based on evidence, they have created a didactic path in which each topic will address one of the relevant aspects in the knowledge of a highly competent professional. All these factors have produced a highly intense syllabus of unmatched quality, which combines theory with state-of-the-art, to propel you towards a new level of mastery in the sector.



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This Advanced Master's Degree is an unparalleled opportunity to get, on one unique course, all the necessary knowledge in Neurology and Neurodevelopment, including the most recent advances in intervention techniques and protocols"

Module 1. Update in Neurology Consultations

- 1.1. Medical History in Pediatric Neurology
 - 1.1.1. Clinicians 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. 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 Evaluation
 - 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

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. Congenital Bacterial 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
 - 2.2.1. Introduction
 - 2.2.2. The Embryonic Process and its Disorders
 - 2.2.3. Main CNS Abnormalities
 - 2.2.3.1. Dorsal Induction Abnormalities
 - 2.2.3.2. Ventral Induction Abnormalities
 - 2.2.3.3. Midline Alterations
 - 2.2.3.4. Cell Proliferation-Differentiation Abnormalities.
 - 2.2.3.5. Neuronal Migration Abnormalities
 - 2.2.3.6. Abnormalities of the Posterior Fossa Structure
 - 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. Advances in Central and Peripheral Motor Disorders

- 3.1. Cerebral Palsy
 - 3.1.1. Concept
 - 3.1.2. Etiology and Risk Factors
 - 3.1.2.1. Prenatal Factors
 - 3.1.2.1.1. Perinatal Factors
 - 3.1.2.1.2. Postnatal Factors
 - 3.1.2. Clinical Forms
 - 3.1.2.1. Spastic ICP
 - 3.1.2.2. Spastic Diplegia
 - 3.1.2.3. Spastic Hemiplegia
 - 3.1.2.4. Spastic Triplegia
 - 3.1.2.5. Dyskinetic or Athetoid ICP
 - 3.1.2.6. Ataxic ICP
 - 3.1.3. Comorbid Disorders
 - 3.1.4. Microbiological
 - 3.1.5. Treatment
- 3.2. Motor Neuron Diseases in Childhood
 - 3.2.1. Generalized Forms of Motor Neuron Diseases
 - 3.2.1.1. Spinal Muscular Atrophy
 - 3.2.1.2. Other Variations of Spinal Muscular Atrophy
 - 3.2.2. Focal Forms of Motor Neuron Diseases in Childhood
- 3.3. Juvenile Myasthenia Gravis and Other Neuromuscular Junction Disorders
 - 3.3.1. Juvenile Myasthenia Gravis in Childhood
 - 3.3.2. Transient Neonatal Myasthenia Gravis
 - 3.3.3. Congenital Myasthenic Syndromes
 - 3.3.4. Childhood Botulism
- 3.4. Childhood Muscular Dystrophy
 - 3.4.1. Childhood Muscular Dystrophy: Dystrophinopathies
 - 3.4.2. Childhood Muscular Dystrophies Other than Dystrophinopathies
- 3.5. Childhood Myotonic Disorders
 - 3.5.1. Childhood Congenital Myopathies
 - 3.5.2. Childhood Inflammatory and Metabolic Myopathies

- 3.6. Childhood Neuropathies
 - 3.6.1. Motor Neuropathies
 - 3.6.2. Sensorimotor Neuropathies
 - 3.6.3. Sensory Neuropathies

Module 4. Update on Inborn Errors of Metabolism

- 4.1. Introduction to Inborn Errors of Metabolism
 - 4.1.1. Introduction and Concept
 - 4.1.2. Etiology and Classification
 - 4.1.3. Clinical Manifestations
 - 4.1.4. General Diagnostic Process
 - 4.1.5. General Intervention Guidelines
- 4.2. Mitochondrial Diseases
 - 4.2.1. Oxidative Phosphorylation Defects
 - 4.2.2. Krebs Cycle Defect
 - 4.2.3. Etiology and Pathophysiology
 - 4.2.4. Classification
 - 4.2.5. Microbiological
 - 4.2.6. Treatment
- 4.3. Fatty Acid β -Oxidation Defects
 - 4.3.1. Introduction to Beta-Oxidation Disorders
 - 4.3.2. Pathophysiology of Beta-Oxidation Disorders
 - 4.3.3. Clinical Manifestations of Beta-Oxidation Disorders
 - 4.3.4. Diagnosis of Beta-Oxidation Disorders
 - 4.3.5. Treatment of Beta-Oxidation Disorders
- 4.4. Gluconeogenesis Defects
 - 4.4.1. Etiology and Pathophysiology
 - 4.4.2. Classification
 - 4.4.3. Microbiological
 - 4.4.4. Treatment
- 4.5. Peroxisomal Diseases
 - 4.5.1. Zellweger Syndrome
 - 4.5.2. X-linked Adrenoleukodystrophy
 - 4.5.3. Other Peroxisomal Diseases

- 4.6. Congenital Glycosylation Defects
 - 4.6.1. Etiology and Pathophysiology
 - 4.6.2. Classification
 - 4.6.3. Microbiological
 - 4.6.4. Treatment
- 4.7. Neurotransmitter CMD
 - 4.7.1. Introduction to Neurotransmitter Metabolic Diseases
 - 4.7.2. General Concepts of Neurotransmitter Metabolic Diseases
 - 4.7.3. Disorders of GABA Metabolism
 - 4.7.4. Biogenic Amine Disorder
 - 4.7.5. Startle Disease or Hereditary Hyperekplexia
- 4.8. Creatine Brain Defects
 - 4.8.1. Etiology and Pathophysiology
 - 4.8.2. Classification
 - 4.8.3. Microbiological
 - 4.8.4. Treatment
- 4.9. Aminoacidopathies
 - 4.9.1. Phenylketonuria.
 - 4.9.2. Hyperphenylalaninemia
 - 4.9.3. Tetrahydrobiopterin Deficiency
 - 4.9.4. Non-Ketotic Hyperglycemia
 - 4.9.5. Maple Syrup Urine Disease
 - 4.9.6. Homocystinuria
 - 4.9.7. Tyrosinemia Type II
- 4.10. IEM of Purines and Pyrimidines
 - 4.10.1. Etiology and Pathophysiology
 - 4.10.2. Classification
 - 4.10.3. Microbiological
 - 4.10.4. Treatment
- 4.11. Lysosomal Diseases
 - 4.11.1. Mucopolysaccharidosis
 - 4.11.2. Oligosaccharidosis
 - 4.11.3. Sphingolipidosis
 - 4.11.4. Other Lysosomal Diseases
- 4.12. Glycogenosis
 - 4.12.1. Etiology and Pathophysiology
 - 4.12.2. Classification
 - 4.12.3. Microbiological
 - 4.12.4. Treatment
- 4.13. Organic Acidemias
 - 4.13.1. Methylmalonic Acidemia
 - 4.13.2. Propionic Acidemia
 - 4.13.3. Isovaleric Acidemia
 - 4.13.4. Glutaric Aciduria Type I
 - 4.13.5. 3-Methyl Crotonyl Glyciduria
 - 4.13.6. Holocarboxylase Synthetase Deficiency
 - 4.13.7. Biotinidase Deficiency
 - 4.13.8. 3-Methylglutaconyl Aciduria Type I
 - 4.13.9. 3-Methylglutaconyl Aciduria Type III
 - 4.13.10. D-2 Hydroxyglutaric Aciduria
 - 4.13.11. L-2 Hydroxyglutaric Aciduria
 - 4.13.12. 4-Hydroxybutyric Aciduria
 - 4.13.13. Deficiency of Acetoacetyl CoA-Thiolase
- 4.14. IEM of Carbohydrates
 - 4.14.1. Etiology and Pathophysiology
 - 4.14.2. Classification
 - 4.14.3. Microbiological
 - 4.14.4. Treatment

Module 5. Advances in Developmental, Learning and Neuropsychiatric Disorders

- 5.1. Delayed Psychomotor Development
 - 5.1.1. Concept
 - 5.1.2. Etiology
 - 5.1.3. Epidemiology
 - 5.1.4. Symptoms
 - 5.1.5. Microbiological
 - 5.1.6. Treatment
- 5.2. Generalized Developmental Disorders
 - 5.2.1. Concept
 - 5.2.2. Etiology
 - 5.2.3. Epidemiology
 - 5.2.4. Symptoms
 - 5.2.5. Microbiological
 - 5.2.6. Treatment
- 5.3. Attention Deficit and Hyperactivity Disorder
 - 5.3.1. Concept
 - 5.3.2. Etiology
 - 5.3.3. Epidemiology
 - 5.3.4. Symptoms
 - 5.3.5. Microbiological
 - 5.3.6. Treatment
- 5.4. Eating Disorders
 - 5.4.1. Introduction: Anorexia, Bulimia and Binge Eating Disorder
 - 5.4.2. Concept
 - 5.4.3. Etiology
 - 5.4.4. Epidemiology
 - 5.4.5. Symptoms
 - 5.4.6. Microbiological
 - 5.4.7. Treatment



- 5.5. Sphincter Control Disorder
 - 5.5.1. Introduction: Primary Nocturnal Enuresis and Encopresis
 - 5.5.2. Concept
 - 5.5.3. Etiology
 - 5.5.4. Epidemiology
 - 5.5.5. Symptoms
 - 5.5.6. Microbiological
 - 5.5.7. Treatment
- 5.6. Psychosomatic/Functional Disorders
 - 5.6.1. Introduction: Conversive Disorders and Simulated Disorders
 - 5.6.2. Concept
 - 5.6.3. Etiology
 - 5.6.4. Epidemiology
 - 5.6.5. Symptoms
 - 5.6.6. Microbiological
 - 5.6.7. Treatment
- 5.7. Mood Disorders
 - 5.7.1. Introduction: Anxiety and Depression
 - 5.7.2. Concept
 - 5.7.3. Etiology
 - 5.7.4. Epidemiology
 - 5.7.5. Symptoms
 - 5.7.6. Microbiological
 - 5.7.7. Treatment
- 5.8. Schizophrenia
 - 5.8.1. Concept
 - 5.8.2. Etiology
 - 5.8.3. Epidemiology
 - 5.8.4. Symptoms
 - 5.8.5. Microbiological
 - 5.8.6. Treatment

- 5.9. Learning Disorders
 - 5.9.1. Introduction
 - 5.9.2. Language Disorders
 - 5.9.3. Reading Disorder
 - 5.9.4. Writing Disorder
 - 5.9.5. Calculation Disorder
 - 5.9.6. Non-Verbal Learning Disorder.
- 5.10. Sleep Disorders
 - 5.10.1. Introduction
 - 5.10.2. Conciliation Disorder
 - 5.10.3. Fragmented Sleep Disorder
 - 5.10.4. Delayed Sleep Cycle
 - 5.10.5. Assessment
 - 5.10.6. Treatment

Module 6. Update on Neurosurgical Pathology in Pediatric Neurology

- 6.1. Supratentorial CNS Tumors
- 6.2. CNS Infratentorial and Spinal Tumors
- 6.3. Non-Embryonal Brain Tumors in Pediatric and Adolescent Patients
- 6.4. Neuropsychological Assessment and Rehabilitation in Children with CNS Tumors
- 6.5. Non-Oncological Space Occupying Processes
 - 6.5.1. Concept
 - 6.5.2. Classification
 - 6.5.3. Clinical manifestations
 - 6.5.4. Microbiological
 - 6.5.5. Treatment
- 6.6. Infantile Hydrocephalus
 - 6.6.1. Concept and Epidemiology
 - 6.6.2. Etiology and Pathophysiology
 - 6.6.3. Classification
 - 6.6.4. Clinical Manifestations
 - 6.6.5. Microbiological
 - 6.6.6. Treatment

- 6.7. Childhood Cerebrovascular Disease
 - 6.7.1. Concept and Epidemiology
 - 6.7.2. Etiology and Pathophysiology
 - 6.7.3. Classification
 - 6.7.4. Clinical manifestations
 - 6.7.5. Microbiological
 - 6.7.6. Treatment

Module 7. Advances in Infectious, Parainfectious, Inflammatory and/or Autoimmune Diseases of the Nervous System

- 7.1. Meningeal Syndrome
 - 7.1.1. Bacterial Meningitis
 - 7.1.2. Epidemiology
 - 7.1.3. Hypnosis
 - 7.1.4. Microbiological
 - 7.1.5. Treatment
 - 7.1.6. Acute Viral Meningitis
 - 7.1.7. Epidemiology
 - 7.1.8. Hypnosis
 - 7.1.9. Microbiological
 - 7.1.10. Treatment
- 7.2. Encephalitic Syndrome
 - 7.2.1. Acute and Chronic Encephalitis
 - 7.2.3. Epidemiology
 - 7.2.4. Hypnosis
 - 7.2.5. Microbiological
 - 7.2.6. Treatment
 - 7.2.7. Viral Encephalitis.
 - 7.2.8. Epidemiology
 - 7.2.9. Hypnosis
 - 7.2.10. Microbiological
 - 7.2.11. Treatment

- 7.3. Other CNS Infections
 - 7.3.1. Fungal Infections
 - 7.3.2. Epidemiology
 - 7.3.3. Hypnosis
 - 7.3.4. Microbiological
 - 7.3.5. Treatment
 - 7.3.6. Parasite Infections
 - 7.3.7. Epidemiology
 - 7.3.8. Hypnosis
 - 7.3.9. Microbiological
 - 7.3.10. Treatment
- 7.4. Demyelinating and Parainfectious Diseases
 - 7.4.1. Acute Disseminated Encephalomyelitis (ADME)
 - 7.4.2. Acute Postinfectious Ataxia
- 7.5. Toxic and Metabolic Encephalopathies
 - 7.5.1. Classification and Types
 - 7.5.2. Epidemiology
 - 7.5.3. Hypnosis
 - 7.5.4. Microbiological
 - 7.5.5. Treatment

Module 8. Malformations, Chromosomal Alterations and Other Genetic Alterations of the CNS

- 8.1. Malformations of the CNS
 - 8.1.1. Introduction
 - 8.1.2. Classification
 - 8.1.3. Dorsal Induction Abnormalities
 - 8.1.4. Ventral Induction Abnormalities
 - 8.1.5. Midline Alterations
 - 8.1.6. Cell Proliferation-Differentiation Abnormalities
 - 8.1.7. Neuronal Migration Abnormalities
 - 8.1.8. Abnormalities of the Posterior Fossa Structure

- 8.2. Most Relevant Chromosomal Alterations in Pediatric Neurology
 - 8.2.1. Introduction
 - 8.2.2. Classification
 - 8.2.3. Autosomal Aneuploidies
 - 8.2.4. Sexual Aneuploidies
- 8.3. Neurocutaneous Syndromes
 - 8.3.1. Neurofibromatosis Type I
 - 8.3.2. Neurofibromatosis Type II
 - 8.3.3. Tuberous Sclerosis
 - 8.3.4. Incontinentia Pigmenti
 - 8.3.5. Sturge-Weber Syndrome
 - 8.3.6. Other Neurocutaneous Syndromes
- 8.4. Other Relevant Genetic Syndromes in Pediatric Neurology
 - 8.4.1. Prader Willi Syndrome
 - 8.4.2. Angelman Syndrome
 - 8.4.3. Fragile X Syndrome
 - 8.4.4. Williams Syndrome
- 8.5. Clinical Application of Genetic Studies in Neuropediatrics
 - 8.5.1. Introduction
 - 8.5.2. Karyotype
 - 8.5.3. Fragile X Study
 - 8.5.4. Subtelomeric FISH Probes
 - 8.5.5. CGH Array
 - 8.5.6. Exome
 - 8.5.7. Sequencing

Module 9. Advances in Related Areas. Neuro-Ophthalmology, Neurotology, Nutrition

- 9.1. Neuro-Ophthalmology
 - 9.1.1. Papillae Alterations
 - 9.1.1.1. Congenital Abnormalities
 - 9.1.1.2. Papillary Atrophy
 - 9.1.1.3. Papillary Edema
 - 9.1.2. Pupils
 - 9.1.2.1. Anisocoria
 - 9.1.2.2. Sympathetic Paralysis
 - 9.1.3. Alteration of the Oculomotor Function
 - 9.1.3.1. Ophthalmoplegia
 - 9.1.3.2. Gaze Disorders
 - 9.1.3.3. Apraxia
 - 9.1.3.4. Nystagmus
- 9.2. Neurotology
 - 9.2.1. Hearing
 - 9.2.2. Exploration
 - 9.2.3. Hearing Loss
 - 9.2.4. Vestibular Function
 - 9.2.5. Vestibular Function Alterations
- 9.3. Nutrition in Pediatric Neurology
 - 9.3.1. Normal Nutritional Recommendations
 - 9.3.2. Nutritional Recommendations in Neurological Disorders
 - 9.3.3. Nutritional Supplements
 - 9.3.4. Specific Therapeutic Diets
- 9.4. Pharmacology
 - 9.4.1. Nervous System Pharmacology
 - 9.4.2. Pharmacology in Pediatrics
 - 9.4.3. Drugs Frequently Used in Pediatric Neurology
 - 9.4.4. Polytherapy and Drug Resistance

- 9.5. Social Neuropediatrics
 - 9.5.1. Abuse and Neglect
 - 9.5.2. Affective and Sensory Deprivation
 - 9.5.3. Adoption
 - 9.5.4. Grief

Module 10. Advances in Neurological Emergencies

- 10.1. Status Epilepticus
 - 10.1.1. Concept and Epidemiology
 - 10.1.2. Etiology and Classification
 - 10.1.3. Clinical Presentation
 - 10.1.4. Microbiological
 - 10.1.5. Treatment
- 10.2. Coma and Acute Confusional Syndrome
 - 10.2.1. Concept and Epidemiology
 - 10.2.2. Etiology and Classification
 - 10.2.3. Clinical Presentation
 - 10.2.4. Microbiological
 - 10.2.5. Treatment
- 10.3. Severe Cranioencephalic Trauma
 - 10.3.1. Concept and Epidemiology
 - 10.3.2. Etiology and Classification
 - 10.3.3. Clinical Presentation
 - 10.3.4. Microbiological
 - 10.3.5. Treatment
- 10.4. Acute Hemiplegia. Stroke
 - 10.4.1. Concept and Epidemiology
 - 10.4.2. Etiology and Classification
 - 10.4.3. Clinical Presentation
 - 10.4.4. Microbiological
 - 10.4.5. Treatment

- 10.5. Acute Intracranial Hypertension Syndrome Valvular Dysfunction
 - 10.5.1. Concept and Epidemiology
 - 10.5.2. Etiology
 - 10.5.3. Clinical Presentation
 - 10.5.4. Microbiological
 - 10.5.5. Treatment
- 10.6. Acute Spinal Cord Injury. Acute Flaccid Paralysis
 - 10.6.1. Concept and Epidemiology
 - 10.6.2. Etiology and Classification
 - 10.6.3. Clinical Presentation
 - 10.6.4. Microbiological
 - 10.6.5. Treatment
- 10.7. Neurological Emergencies Pediatric Oncology
 - 10.7.1. Fever
 - 10.7.2. Tumor Lysis Syndrome
 - 10.7.3. Hypercalcemia
 - 10.7.4. Hyperleukocytosis
 - 10.7.5. Superior Vena Cava Syndrome
 - 10.7.6. Hemorrhagic Cystitis

Module 11. Advances in Paroxysmal Disorders

- 11.1. Febrile Crises
 - 11.1.1. Introduction
 - 11.1.2. Etiology and Genetics
 - 11.1.3. Epidemiology and Classification
 - 11.1.4. Symptoms
 - 11.1.5. Microbiological
 - 11.1.6. Treatment
- 11.2. Infant Epilepsies
 - 11.2.1. West Syndrome
 - 11.2.2. Malignant Partial Migratory Crises in Breastfeeding Infants
 - 11.2.3. Benign Myoclonic Epilepsy in Children
 - 11.2.4. Myoclonic Astatic Epilepsy
 - 11.2.5. Lennox-Gastaut Syndrome
 - 11.2.6. Benign Idiopathic Partial Epilepsies of the Infant and Toddler

- 11.3. School-Age Epilepsies
 - 11.3.1. Epilepsy with Central Temporal Spikes and Related Syndromes
 - 11.3.2. Idiopathic Occipital Epilepsies
 - 11.3.3. Childhood Non-Idiopathic Partial Epilepsies
 - 11.3.4. Childhood Absence Epilepsy
- 11.4. Epilepsy in Older Children and Adolescents
 - 11.4.1. Juvenile Absence Epilepsy
 - 11.4.2. Juvenile Myoclonic Epilepsy
 - 11.4.3. Great Malaise of Awakening
- 11.5. Treatment of Epilepsy in Childhood
 - 11.5.1. Introduction
 - 11.5.2. Antiepileptic Drugs
 - 11.5.3. The Choice of Treatment
 - 11.5.4. The Process of Starting Treatment
 - 11.5.5. Monitoring and Control
 - 11.5.6. Suspending Treatment
 - 11.5.7. Drug Resistance
 - 11.5.8. Alternative Treatments
- 11.6. Headache
 - 11.6.1. Etiology
 - 11.6.2. Epidemiology
 - 11.6.2. Classification
 - 11.6.3. Microbiological
 - 11.6.4. Complementary Tests
 - 11.6.5. Treatment
- 11.7. Movement Disorders
 - 11.7.1. Introduction
 - 11.7.2. Classification
 - 11.7.3. Disorders with Increased Movement
 - 11.7.4. Dyskinetics: Tics, Chorea, and Ballismus
 - 11.7.5. Disorders with Decreased Movement
 - 11.7.6. Hypokinetic-Rigid Syndromes: Parkinsonism

Module 12. Diagnostic Methodology: Clinical Localization and Explorations in Clinical Research in Neurology

- 12.1. General Principles of Neurological Topography and Semiology
- 12.2. Clinical Localization of the Cerebral Hemispheres. Aphasia, Apraxia, Agnosia, and Other Disorders of Higher Cortical Functions of the Human Brain
- 12.3. Posterior Fossa Syndromes: Cerebellum and Brainstem
- 12.4. Cranial Nerves and Basic Principles of Neuro-Ophthalmology
- 12.5. Spinal Cord Syndromes
- 12.6. Explorations for Clinical Neurological Research
- 12.7. CSF, Laboratory, and Genetic Studies
- 12.8. Neuroradiology. Radioisotopic Imaging
- 12.9. Clinical neurophysiology
- 12.10. Neuropathology

Module 13. Upper and Lower Motor Neuron Diseases, Neuromuscular Plate, Peripheral Nerves, and Myopathies

- 13.1. Pathogenesis of Upper and Lower Motor Neuron Diseases
- 13.2. Classical Forms (ALS)
- 13.3. Variant and Genetic Forms
- 13.4. Peripheral Neuropathies
- 13.5. Genetically Determined Neuropathies
- 13.6. Neuropathies in Genetically Determined Systemic Diseases
- 13.7. Genetic Myopathies
- 13.8. Acquired Myopathies
- 13.9. Myasthenia Gravis
- 13.10. Other Forms of Neuromuscular Transmission Disorders

Module 14. Ischemic and Hemorrhagic Strokes. Other Neurovascular Disorders

- 14.1. Ischemia and Cerebral Infarction: Syndromes in Ischemic Strokes
- 14.2. Ischemic Strokes: Neurovascular Anatomy, Classification and Clinical Assessment
- 14.3. Atherosclerosis, Cardioembolic, Lacunar Syndromes, and Others
- 14.4. Vascular Dementia
- 14.5. Cerebral Hemorrhage. Hemorrhagic Strokes
- 14.6. Aneurysms, Vascular Malformations, Cerebral Amyloid Angiopathy

- 14.7. Cerebral Venous Thrombosis
- 14.8. Hypertensive and Anoxic Encephalopathies
- 14.9. Coagulation and Nervous System Disorders
- 14.10. Endovascular Therapy and Fibrinolysis Stroke Units
- 14.11. Neurorehabilitation Management of Sequelae and Control of Spasticity

Module 15. Neurodegenerative Diseases: Alzheimer's Disease and Parkinson's Disease. Other Dementias, Parkinsonisms, and Movement Disorders. Spinocerebellar Heredoataxias

- 15.1. Alzheimer's Disease: Macroscopic and Microscopic Findings
- 15.2. Alzheimer's Disease: Clinical Findings
- 15.3. Research and Treatment of Degenerative Dementias
- 15.4. Dementia and Lewy Bodies
- 15.5. Frontotemporal Dementia, Lobar Atrophies, Tauopathies, and Frontotemporal Lobar Degeneration with Immunoreactive Changes
- 15.6. Parkinson's Disease
- 15.7. Other Parkinsonisms
- 15.8. Primary and Secondary Dystonia
- 15.9. Choreiform and Ballistic Syndromes
- 15.10. Spinocerebellar Heredoataxias

Module 16. Trauma of the Nervous System. Neuro-oncology: Tumors and Paraneoplastic and Cerebellar Syndromes. Neurocutaneous Syndromes and Neurodevelopmental Disorders

- 16.1. Neurotraumatology: Brain and Spinal Trauma
- 16.2. Intracranial Tumors
- 16.3. Spinal Tumors
- 16.4. Metastases. Paraneoplastic and Cerebellar Syndromes
- 16.5. Malformations and Familial Syndromes: Neural Tube Defects, Spina Bifida, Chiari Malformation, Dandy-Walker, Lhermitte-Duclos Agenesis of the Corpus Callosum and Septum Pellucidum
- 16.6. Neuronal Migration Disorders, Heterotopias Arachnoid Cysts, Porencephaly, Hydrocephalias
- 16.7. Neurocutaneous Syndromes
- 16.8. Von Recklinghausen's Neurofibromatosis
- 16.9. Bourneville's Disease Other Neurocutaneous Syndromes and Derivatives
- 16.10. Other Neurodevelopment Disorders

Module 17. Multiple Sclerosis and Other Inflammatory and Demyelinating Disorders of the Nervous System

- 17.1. Multiple Sclerosis (MS) and Other Demyelinating Processes: Classification
- 17.2. MS Neuropathology
- 17.3. MS Pathophysiology
- 17.4. Clinical Aspects and Evolutionary Forms of MS
- 17.5. MS Diagnostic Investigation
- 17.6. MS Treatment
- 17.7. Devic's Neuromyelitis Optica, Baló's Disease, and Schilder's Disease
- 17.8. Acute Disseminated Encephalomyelitis
- 17.9. Leukodystrophies: Lysosomal and Peroxisomal Disorders
- 17.10. Other Alterations of the White Matter

Module 18. Headaches, Neuralgias, and Craniofacial Pain

- 18.1. Classification of Headaches and Cranial Neuralgias: Primary and Secondary Headaches
- 18.2. Migraine and Subtypes
- 18.3. Tension-Type Headache
- 18.4. Trigemino-Autonomic Headaches (Cluster Headache), Paroxysmal Hemicrania, Continuous Hemicrania, SUNA, SUNCT
- 18.5. Other Primary Headaches
- 18.6. Idiopathic Trigeminal Neuralgia
- 18.7. Glossopharyngeal Neuralgia
- 18.8. Arnold's and Trochlear Neuralgia
- 18.9. Postherpetic Neuralgia
- 18.10. Secondary Neuralgias: Sinusitis, Glaucoma, Giant Cell Arteritis, Idiopathic Intracranial Hypertension, Intracranial Hypotension Syndrome, and Others

Module 19. Sleep Disorders. Alterations in the Level of Consciousness

- 19.1. Sleep Medicine
- 19.2. Insomnia
- 19.3. Sleep-related Respiratory Disturbances and their Neurological Repercussions
- 19.4. Hypersomnias
- 19.5. Circadian Rhythm Disturbances
- 19.6. Parasomnias and Other Sleep Disorders
- 19.7. Abnormal Movements Related to Sleep. Bruxism
- 19.8. Delirium, Acute Confusional Syndrome
- 19.9. Stupor and Coma
- 19.10. Syncope

Module 20. Epilepsies and Epileptic Seizures

- 20.1. Definition and Classification. Types of Seizures and Types of Epilepsy
- 20.2. Partial Seizures (Focal or Local)
- 20.3. Generalized Seizures
- 20.4. Unclassifiable Crises Pseudo-Crisis
- 20.5. Etiology of Epilepsy
- 20.6. Epilepsy Investigation (1): EEG
- 20.7. Epilepsy Research (2): m-EEG, Video-EEG, Invasive EEG
- 20.8. Epilepsy Investigation (3): SPECT, PET, MRI, and Specific Neuroimaging Protocols for Epilepsy Diagnosis
- 20.9. Medical Treatment. Epilepsy Surgery
- 20.10. Status Epilepticus

Module 21. Infections of the Nervous System Neurological and Psychiatric Aspects of Systemic Diseases, Toxics, and External Agents

- 21.1. Infections the Nervous System
- 21.2. Effects of Radiation, Drugs, and Alcohol on the Nervous System
- 21.3. Action of Physical Agents, Neurotoxicants, and Nutritional Deficits on the Nervous System
- 21.4. Neurology of Endocrine Diseases
- 21.5. Vasculitis, Connective Tissue Diseases, and the Nervous System
- 21.6. Psychiatric Aspects of Neurological Diseases: Conversion, Behavioral, and Personality Disorders Depression and Psychosis in Neurological Practice
- 21.7. Other Neurological Disorders in Systemic Diseases
- 21.8. Inborn Errors of Metabolism of the Nervous System
- 21.9. Mitochondrial and Ion Channel Disorders of the Nervous System
- 21.10. Neurocovid



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

06 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.



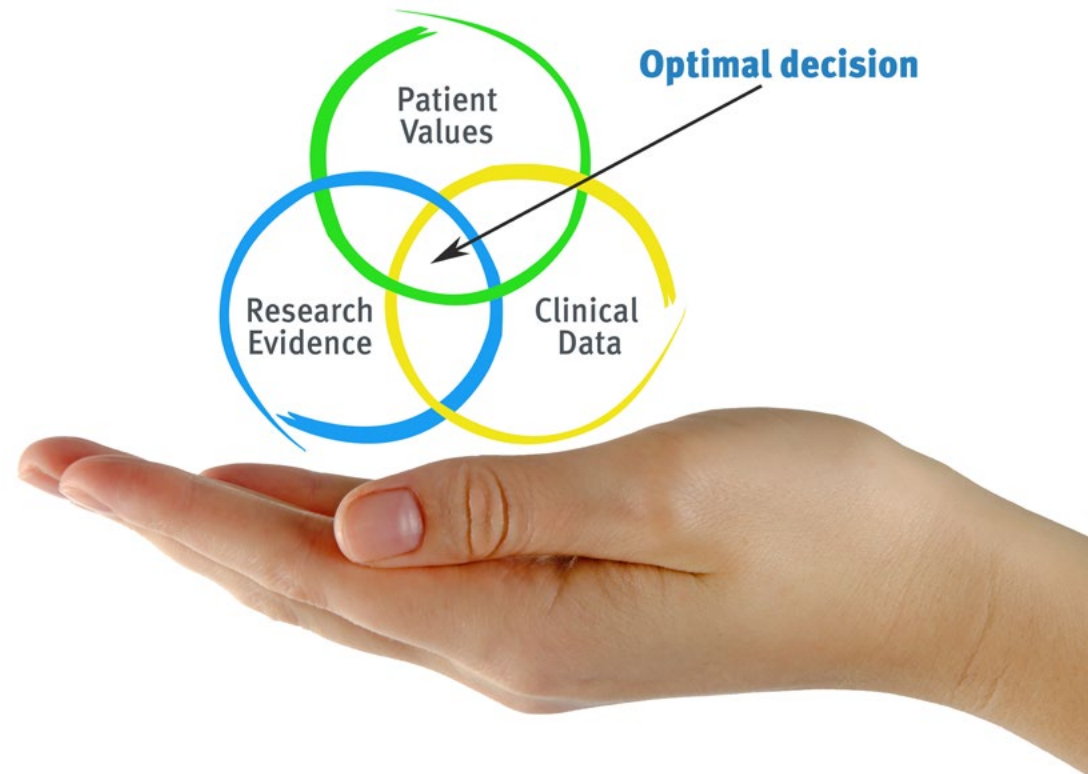
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Discover Relearning, a system that abandons conventional linear learning, to take you through cyclical teaching systems: a way of learning that has proven to be extremely effective, especially in subjects that require memorization"

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. Gérvás, 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.

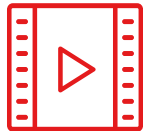
Relearning will allow you to learn with less effort and better performance, involving you more in your specialization, developing a critical mindset, defending arguments, and contrasting opinions: a direct equation to success.

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

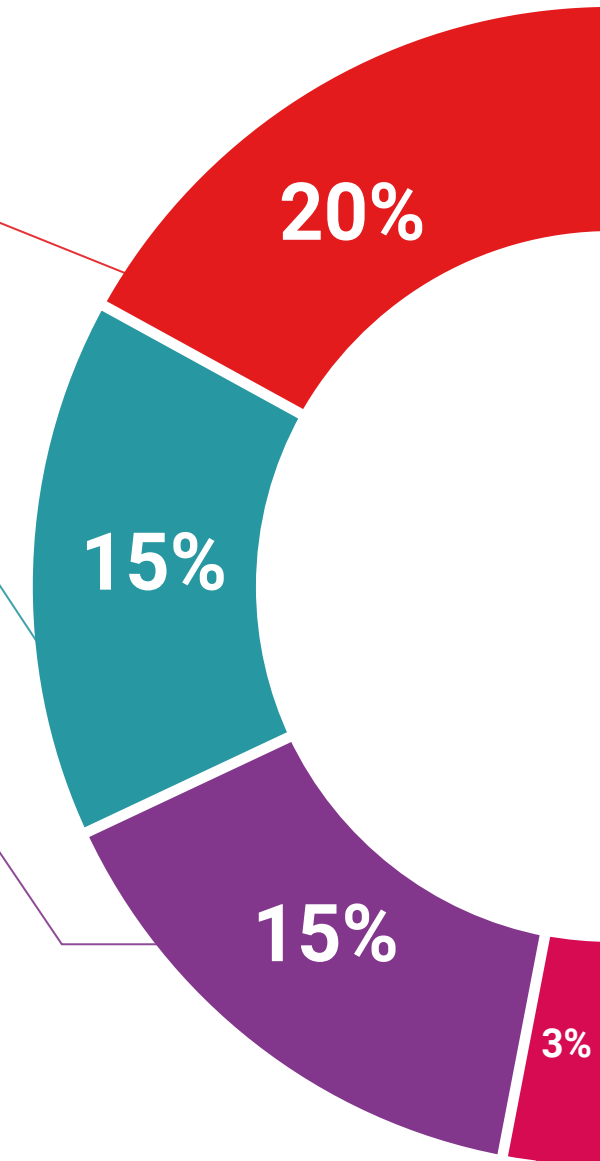
The TECH team presents the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

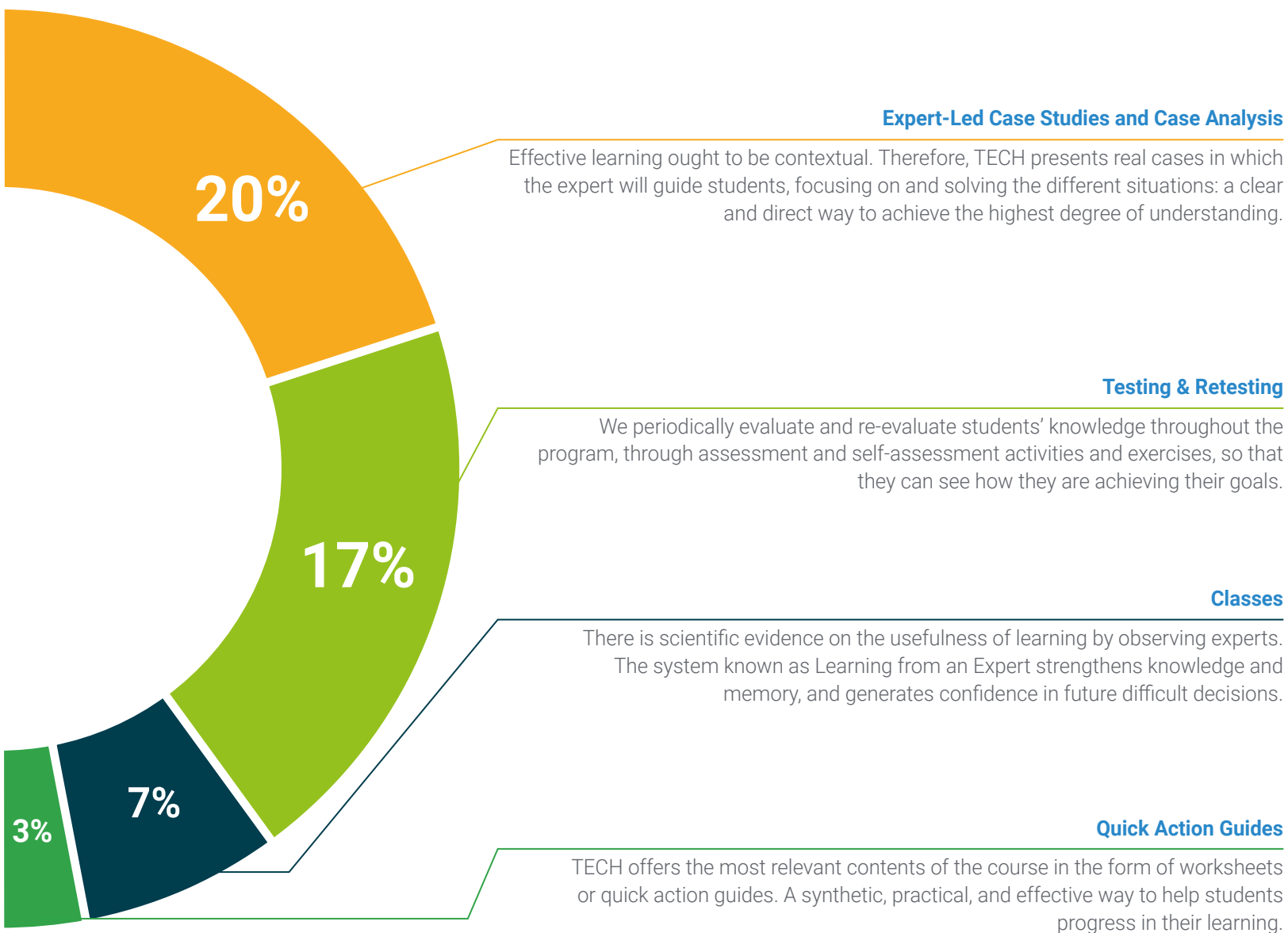
This exclusive educational system for presenting multimedia content was awarded by Microsoft as a "European Success Story".



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.





07 Certificate

The Advanced Master's Degree in Neurology and Neurodevelopment guarantees, in addition to the most rigorous and updated training, access to an Advanced Master's Degree issued by TECH Technological University.



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*Successfully complete this training
and receive your university degree
without travel or laborious paperwork”*

This **Advanced Master's Degree in Neurology and Neurodevelopment** contains the scientific most complete and updated program on the market.

After the student has passed the assessments, they will receive their corresponding **Advanced Master's Degree** issued by **TECH Technological University** via tracked delivery*.

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

Title: **Advanced Master's Degree in Neurology and Neurodevelopment**

Official N° of hours: **3,000 h.**



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



Advanced Master's
Degree
Neurology and
Neurodevelopment

Course Modality: Online

Duration: 2 years

Accreditation: TECH Technological University

Official N° of hours: 3,000 h.

Advanced Master's Degree

Neurology and Neurodevelopment

