

Advanced Master's Degree Neurological Physiotherapy





Advanced Master's Degree Neurological Physiotherapy

- » Modality: online
- » Duration: 2 years
- » Certificate: TECH Global University
- » Credits: 120 ECTS
- » Schedule: at your own pace
- » Exams: online

Website: www.techtitude.com/us/physiotherapy/advanced-master-degree/advanced-master-degree-neurological-physiotherapy

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01

Introduction to the Program

Neurological Physiotherapy has evolved significantly over the last few decades, establishing itself as an essential discipline within comprehensive rehabilitation. In this regard, advancements in understanding neuroplasticity and the development of specific techniques have allowed specialists to more effectively address motor, sensory, and functional deficits associated with various Neurological Pathologies. However, physiotherapists need to stay at the forefront of the most innovative strategies to make a significant impact on both the functionality and autonomy of patients. To support this effort, TECH has created a pioneering online university qualification focused on the latest innovations in the field of Neurological Physiotherapy.





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Through this program, you will master the most innovative techniques in Neurological Physiotherapy and enhance the overall well-being of patients with various nervous system disorders”

A recent study conducted by the World Health Organization estimates that over 60 million people suffer from some form of Neurodegenerative Disorder. In light of this reality, the organization emphasizes the growing need to develop highly effective therapeutic approaches that go beyond traditional medical management. In this context, Neurological Physiotherapy is becoming a key intervention to assist individuals in their functional recovery. Therefore, professionals need to handle the most modern therapeutic interventions to improve mobility, reduce muscle stiffness, and increase user independence.

In response to this framework, TECH presents an innovative program in Neurological Physiotherapy. Developed by leading experts in the field, the academic pathway will delve into areas ranging from epidemiological foundations to the clinical specifics of the main Neurodegenerative Diseases. The syllabus will provide graduates with the most cutting-edge diagnostic methods to early identify signs of conditions such as Multisystem Atrophy, Multiple Sclerosis, or Acquired Brain Injury. Thanks to this, professionals will develop advanced clinical competencies to design personalized physiotherapy intervention plans, improving the quality of life for patients, optimizing their functional recovery, and promoting their autonomy.

To reinforce these concepts, TECH relies on the revolutionary Relearning method. This learning system promotes a natural and progressive assimilation of content, without resorting to the traditional memorization process. Furthermore, specialists only need a device with internet access to update their knowledge. In this regard, experts have full freedom to individually plan their schedules and educational timelines. Additionally, on the Virtual Campus, they will have access to a library full of multimedia support resources, including detailed videos, specialized readings based on the latest scientific evidence, and interactive summaries.

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

- ♦ The development of practical case studies presented by experts in Neurological Physiotherapy
- ♦ 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
- ♦ Practical exercises where self-assessment can be used to improve learning
- ♦ Its strong emphasis on innovative methodologies in physiotherapy practice
- ♦ 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



You will gain a multidisciplinary approach focused on patients, promoting both functional recovery and long-term emotional well-being"

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You will master the key tools of Information and Communication Technologies to monitor patients' clinical status in real-time”

The teaching staff includes professionals from the field of Neurological Physiotherapy, who bring their work experience to the program, as well as recognized specialists from leading societies and prestigious universities.

The multimedia content, developed with the latest educational technology, will provide the professional with situated and contextual learning, i.e., a simulated environment that will provide an immersive learning experience designed to prepare for real-life situations.

This program is designed around Problem-Based Learning, whereby the student must try to solve the different professional practice situations that arise throughout the program. For this purpose, the professional will be assisted by an innovative interactive video system created by renowned and experienced experts.

You will delve into the most effective strategies to prevent Musculoskeletal Complications and Chronic Pain in patients with Acquired Brain Injury.

Thanks to TECH's revolutionary Relearning system, you will assimilate essential concepts quickly, naturally, and accurately. Forget about memorizing!.



02

Why Study at TECH?

TECH is the world's largest online university. With an impressive catalog of more than 14,000 university programs, available in 11 languages, it is positioned as a leader in employability, with a 99% job placement rate. In addition, it has a huge faculty of more than 6,000 professors of the highest international prestige.



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Study at the largest online university in the world and ensure your professional success. The future begins at TECH”

The world's best online university, according to FORBES

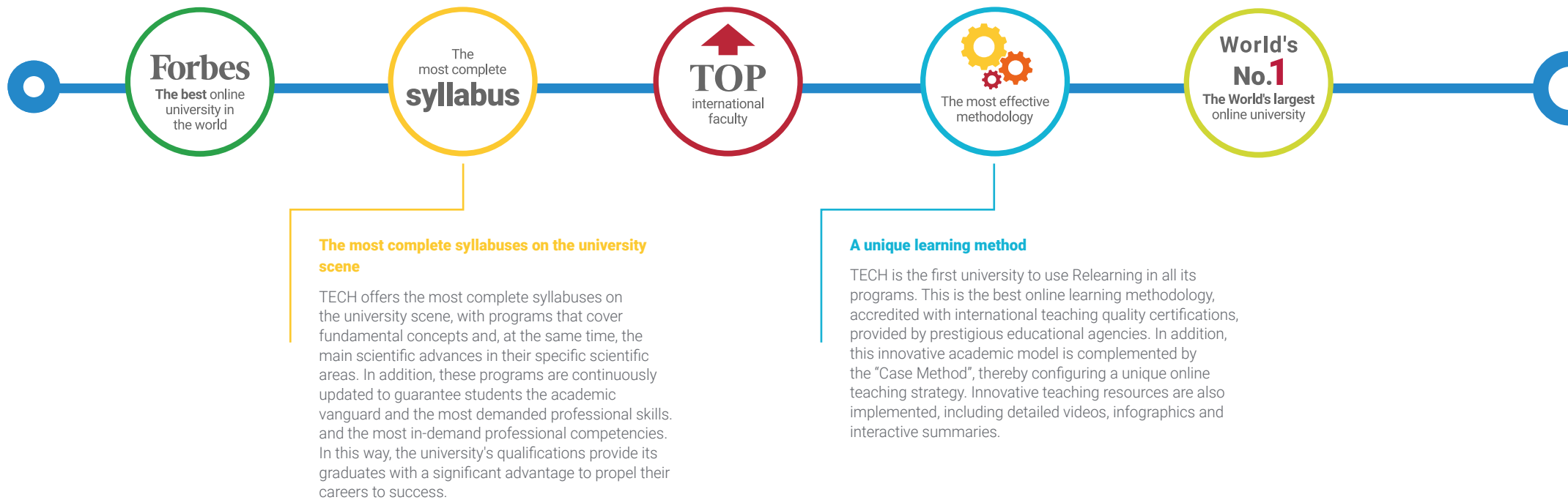
The prestigious Forbes magazine, specialized in business and finance, has highlighted TECH as "the best online university in the world" This is what they have recently stated in an article in their digital edition in which they echo the success story of this institution, "thanks to the academic offer it provides, the selection of its teaching staff, and an innovative learning method oriented to form the professionals of the future".

The best top international faculty

TECH's faculty is made up of more than 6,000 professors of the highest international prestige. Professors, researchers and top executives of multinational companies, including Isaiah Covington, performance coach of the Boston Celtics; Magda Romanska, principal investigator at Harvard MetaLAB; Ignacio Wistuba, chairman of the department of translational molecular pathology at MD Anderson Cancer Center; and D.W. Pine, creative director of TIME magazine, among others.

The world's largest online university

TECH is the world's largest online university. We are the largest educational institution, with the best and widest digital educational catalog, one hundred percent online and covering most areas of knowledge. We offer the largest selection of our own degrees and accredited online undergraduate and postgraduate degrees. In total, more than 14,000 university programs, in ten different languages, making us the largest educational institution in the world.



The official online university of the NBA

TECH is the official online university of the NBA. Thanks to our agreement with the biggest league in basketball, we offer our students exclusive university programs, as well as a wide variety of educational resources focused on the business of the league and other areas of the sports industry. Each program is made up of a uniquely designed syllabus and features exceptional guest hosts: professionals with a distinguished sports background who will offer their expertise on the most relevant topics.

Leaders in employability

TECH has become the leading university in employability. Ninety-nine percent of its students obtain jobs in the academic field they have studied within one year of completing any of the university's programs. A similar number achieve immediate career enhancement. All this thanks to a study methodology that bases its effectiveness on the acquisition of practical skills, which are absolutely necessary for professional development.



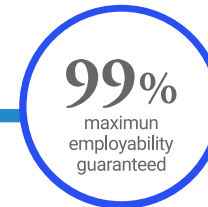
Google Premier Partner

The American technology giant has awarded TECH the Google Premier Partner badge. This award, which is only available to 3% of the world's companies, highlights the efficient, flexible and tailored experience that this university provides to students. The recognition not only accredits the maximum rigor, performance and investment in TECH's digital infrastructures, but also places this university as one of the world's leading technology companies.



The top-rated university by its students

Students have positioned TECH as the world's top-rated university on the main review websites, with a highest rating of 4.9 out of 5, obtained from more than 1,000 reviews. These results consolidate TECH as the benchmark university institution at an international level, reflecting the excellence and positive impact of its educational model.



03 Syllabus

The educational content included in this program has been designed by renowned specialists in the field of Neurological Physiotherapy, with a focus on the needs of the current job market. As such, the syllabus will delve into topics ranging from the most modern diagnostic techniques for early detection of Neurodegenerative Diseases such as Parkinson's or Multiple Sclerosis to Vascular Dementia. Additionally, the program will explore the most innovative strategies to improve the quality of life for patients with spinal cord injuries and apply advanced technologies such as functional electrical stimulation.





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You will deepen your understanding of the use of cutting-edge instruments such as functional stimulation systems to enhance neurological recovery”

Module 1. Introduction to Neurodegenerative Diseases

- 1.1. Introduction
 - 1.1.1. Definition
 - 1.1.2. Classification
 - 1.1.3. Epidemiology
- 1.2. Clinical/Symptoms
 - 1.2.1. Symptoms
 - 1.2.2. Signs
- 1.3. Diagnostic Imaging
 - 1.3.1. Structural
 - 1.3.2. Functional Criteria
- 1.4. Neurological Assessment Scales
- 1.5. Neurological Examination
 - 1.5.1. Cranial Nerves, Pathological Reflexes
 - 1.5.2. Tone, Sensitivity, Osteotendinous Reflexes
 - 1.5.3. Manipulation, Coordination, Balance and Gait
- 1.6. Digital Physiotherapy and Reporting
 - 1.6.1. Telephysiotherapy
 - 1.6.2. Scheduled Consultation via Information and Communication Technologies
 - 1.6.3. Writing a Physiotherapy Report
 - 1.6.4. Interpretation of Medical Information
- 1.7. Multidisciplinary Team
 - 1.7.1. Doctor
 - 1.7.2. Occupational Therapist
 - 1.7.3. Speech Therapist
 - 1.7.4. Neuropsychologist
 - 1.7.5. Orthopedic Technician
- 1.8. Physiotherapy Approach
 - 1.8.1. Movement Facilitation Techniques
 - 1.8.2. Neurodynamics
 - 1.8.3. Hydrotherapy
 - 1.8.4. Therapeutic Exercise
 - 1.8.5. Robotics and Virtual Reality

- 1.9. Patient Complications
 - 1.9.1. Pain
 - 1.9.2. Cardiorespiratory System
 - 1.9.3. Musculoskeletal Complications
- 1.10. Patient, Caregiver and Family Information and Counseling

Module 2. Parkinson's Disease and Other Related Neurodegenerative Diseases (Progressive Supranuclear Palsy, Corticobasal Degeneration, Multiple Systemic Atrophy)

- 2.1. Introduction
 - 2.1.1. Anatomy
 - 2.1.2. Physiology
 - 2.1.3. Classification
- 2.2. Epidemiology
- 2.3. Etiology
 - 2.3.1. Transmission Mode
 - 2.3.2. Frequency (F)
 - 2.3.3. Starting Age
- 2.4. Evolution
- 2.5. Prognostic Factors
- 2.6. Evaluation/Diagnosis
 - 2.6.1. Clinical Manifestations
 - 2.6.2. Diagnostic Imaging
 - 2.6.3. Neurological Examination
 - 2.6.4. Neurological Assessment Scales
- 2.7. Treatment
 - 2.7.1. Medical-surgical Treatments
 - 2.7.2. Physiotherapy
 - 2.7.3. Occupational Therapy, Speech Therapy and Neuropsychology
- 2.8. Orthopedics
 - 2.8.1. Support Products
 - 2.8.2. Orthoses
- 2.9. Readaptation
 - 2.9.1. Social Aspects/Support
 - 2.9.2. Comprehensive Care for Patients, Families and Caregivers
- 2.10. Early Prevention and Detection

Module 3. Multiple Sclerosis

- 3.1. Introduction
 - 3.1.1. Anatomy
 - 3.1.2. Physiology
 - 3.1.3. Classification
- 3.2. Epidemiology
- 3.3. Etiology
 - 3.3.1. Transmission Mode
 - 3.3.2. Frequency (F)
 - 3.3.3. Starting Age
- 3.4. Evolution
- 3.5. Prognostic Factors
- 3.6. Evaluation/Diagnosis
 - 3.6.1. Clinical Manifestations
 - 3.6.2. Diagnostic Imaging
 - 3.6.3. Neurological Examination
 - 3.6.4. Neurological Assessment Scales
- 3.7. Treatment
 - 3.7.1. Medical-surgical Treatments
 - 3.7.2. Physiotherapy
 - 3.7.3. Occupational Therapy, Speech Therapy and Neuropsychology
- 3.8. Orthopedics
 - 3.8.1. Support Products
 - 3.8.2. Orthoses
- 3.9. Readaptation
 - 3.9.1. Social Aspects/Support
 - 3.9.2. Comprehensive Care for Patients, Families and Caregivers
- 3.10. Early Prevention and Detection

Module 4. Amyotrophic Lateral Sclerosis

- 4.1. Introduction
 - 4.1.1. Anatomy
 - 4.1.2. Physiology
 - 4.1.3. Classification
- 4.2. Epidemiology
- 4.3. Etiology
 - 4.3.1. Transmission Mode
 - 4.3.2. Frequency (F)
 - 4.3.3. Starting Age
- 4.4. Evolution
- 4.5. Prognostic Factors
- 4.6. Evaluation/Diagnosis
 - 4.6.1. Clinical Manifestations
 - 4.6.2. Diagnostic Imaging
 - 4.6.3. Neurological Examination
 - 4.6.4. Neurological Assessment Scales
- 4.7. Treatment
 - 4.7.1. Medical-surgical Treatments
 - 4.7.2. Physiotherapy
 - 4.7.3. Occupational Therapy, Speech Therapy and Neuropsychology
- 4.8. Orthopedics
 - 4.8.1. Support Products
 - 4.8.2. Orthoses
- 4.9. Readaptation
 - 4.9.1. Social Aspects/Support
 - 4.9.2. Comprehensive Care for Patients, Families and Caregivers
- 4.10. Early Prevention and Detection

Module 5. Huntington's Disease

- 5.1. Introduction
 - 5.1.1. Anatomy
 - 5.1.2. Physiology
 - 5.1.3. Classification
- 5.2. Epidemiology
- 5.3. Etiology
 - 5.3.1. Transmission Mode
 - 5.3.2. Frequency (F)
 - 5.3.3. Starting Age
- 5.4. Evolution
- 5.5. Prognostic Factors
- 5.6. Evaluation/Diagnosis
 - 5.6.1. Clinical Manifestations
 - 5.6.2. Diagnostic Imaging
 - 5.6.3. Neurological Examination
 - 5.6.4. Neurological Assessment Scales
- 5.7. Treatment
 - 5.7.1. Medical-surgical Treatments
 - 5.7.2. Physiotherapy
 - 5.7.3. Occupational Therapy, Speech Therapy and Neuropsychology
- 5.8. Orthopedics
 - 5.8.1. Support Products
 - 5.8.2. Orthoses
- 5.9. Readaptation
 - 5.9.1. Social Aspects/Support
 - 5.9.2. Comprehensive Care for Patients, Families and Caregivers
- 5.10. Early Prevention and Detection

Module 6. Neuromuscular Diseases and Polyneuropathies

- 6.1. Introduction
 - 6.1.1. Anatomy
 - 6.1.2. Physiology
 - 6.1.3. Classification
- 6.2. Epidemiology
- 6.3. Etiology
 - 6.3.1. Transmission Mode
 - 6.3.2. Frequency (F)
 - 6.3.3. Starting Age
- 6.4. Evolution
- 6.5. Prognostic Factors
- 6.6. Evaluation/Diagnosis
 - 6.6.1. Clinical Manifestations
 - 6.6.2. Diagnostic Imaging
 - 6.6.3. Neurological Examination
 - 6.6.4. Neurological Assessment Scales
- 6.7. Treatment
 - 6.7.1. Medical-surgical Treatments
 - 6.7.2. Physiotherapy
 - 6.7.3. Occupational Therapy, Speech Therapy and Neuropsychology
- 6.8. Orthopedics
 - 6.8.1. Support Products
 - 6.8.2. Orthoses
- 6.9. Readaptation
 - 6.9.1. Social Aspects/Support
 - 6.9.2. Comprehensive Care for Patients, Families and Caregivers
- 6.10. Early Prevention and Detection

Module 7. Alzheimers Disease, and Other Neurodegenerative Dementias: Frontotemporal Dementia, Lewy Body Dementia, Vascular Dementia

- 7.1. Introduction
 - 7.1.1. Anatomy
 - 7.1.2. Physiology
 - 7.1.3. Classification
- 7.2. Epidemiology
- 7.3. Etiology
 - 7.3.1. Transmission Mode
 - 7.3.2. Frequency (F)
 - 7.3.3. Starting Age
- 7.4. Evolution
- 7.5. Prognostic Factors
- 7.6. Evaluation/Diagnosis
 - 7.6.1. Clinical Manifestations
 - 7.6.2. Diagnostic Imaging
 - 7.6.3. Neurological Examination
 - 7.6.4. Neurological Assessment Scales
- 7.7. Treatment
 - 7.7.1. Medical-surgical Treatments
 - 7.7.2. Physiotherapy
 - 7.7.3. Occupational Therapy, Speech Therapy and Neuropsychology
- 7.8. Orthopedics
 - 7.8.1. Support Products
 - 7.8.2. Orthoses
- 7.9. Readaptation
 - 7.9.1. Social Aspects/Support
 - 7.9.2. Comprehensive Care for Patients, Families and Caregivers
- 7.10. Early Prevention and Detection

Module 8. Degenerative Cerebellar Diseases: Hereditary Ataxias, Friedreich's Ataxia, and Machado-Joseph Ataxia

- 8.1. Introduction
 - 8.1.1. Anatomy
 - 8.1.2. Physiology
 - 8.1.3. Classification
- 8.2. Epidemiology
- 8.3. Etiology
 - 8.3.1. Transmission Mode
 - 8.3.2. Frequency (F)
 - 8.3.3. Starting Age
- 8.4. Evolution
- 8.5. Prognostic Factors
- 8.6. Evaluation/Diagnosis
 - 8.6.1. Clinical Manifestations
 - 8.6.2. Diagnostic Imaging
 - 8.6.3. Neurological Examination
 - 8.6.4. Neurological Assessment Scales
- 8.7. Treatment
 - 8.7.1. Medical-surgical Treatments
 - 8.7.2. Physiotherapy
 - 8.7.3. Occupational Therapy, Speech Therapy and Neuropsychology
- 8.8. Orthopedics
 - 8.8.1. Support Products
 - 8.8.2. Orthoses
- 8.9. Readaptation
 - 8.9.1. Social Aspects/Support
 - 8.9.2. Comprehensive Care for Patients, Families and Caregivers
- 8.10. Early Prevention and Detection

Module 9. Neurodegenerative Diseases in Childhood

- 9.1. Introduction
 - 9.1.1. Classification
 - 9.1.2. Epidemiology
- 9.2. Neurodevelopment
 - 9.2.1. Emergency Department
 - 9.2.2. Children's
- 9.3. Early Prevention and Detection
- 9.4. White Matter Diseases
- 9.5. Gray Matter Diseases
- 9.6. Other Progressive Neurological Diseases
- 9.7. Assessment
 - 9.7.1. Clinical Manifestations
 - 9.7.2. Neurological Examination
- 9.8. Physiotherapeutic Treatments
 - 9.8.1. Physiotherapeutic Interventions
 - 9.8.2. Support Products
- 9.9. Treatment
 - 9.9.1. Doctor
 - 9.9.2. Occupational Therapy, Speech Therapy and Neuropsychology
- 9.10. Readaptation
 - 9.10.1. Social Aspects
 - 9.10.2. Family Care

Module 10. Neoplasms or Nervous System Tumors

- 10.1. Introduction
 - 10.1.1. Anatomy
 - 10.1.2. Physiology
 - 10.1.3. Classification
- 10.2. Epidemiology
- 10.3. Etiology
 - 10.3.1. Transmission Mode
 - 10.3.2. Frequency (F)
 - 10.3.3. Starting Age





- 10.4. Evolution
- 10.5. Prognostic Factors
- 10.6. Evaluation/Diagnosis
 - 10.6.1. Clinical Manifestations
 - 10.6.2. Diagnostic Imaging
 - 10.6.3. Neurological Examination
 - 10.6.4. Neurological Assessment Scales
- 10.7. Treatment
 - 10.7.1. Medical-surgical Treatments
 - 10.7.2. Physiotherapy
 - 10.7.3. Occupational Therapy, Speech Therapy and Neuropsychology
- 10.8. Orthopedics
 - 10.8.1. Support Products
 - 10.8.2. Orthoses
- 10.9. Readaptation
 - 10.9.1. Social Aspects/Support
 - 10.9.2. Comprehensive Care for Patients, Families and Caregivers
- 10.10. Early Prevention and Detection

Module 11. Neuroanatomy and Neurophysiology

- 11.1. Introduction to Structural Anatomy
- 11.2. Introduction to Functional Anatomy
- 11.3. Spinal Cord
- 11.4. Brainstem
- 11.5. Frontal
- 11.6. Parietal
- 11.7. Temporal
- 11.8. Occipital
- 11.9. Cerebellum
- 11.10. Basal Ganglia
- 11.11. Neuroplasticity
- 11.12. Muscle Tone
- 11.13. Motor Behavior
- 11.14. Motor Control

Module 12. Acquired Brain Injury

- 12.1. Acquired Brain Injury in Adults
- 12.2. Acquired Brain Injury in Childhood
- 12.3. Acquired Brain Injury in the Elderly
- 12.4. Tone Alterations
- 12.5. Hemineglect
- 12.6. Pusher Syndrome
- 12.7. Clinical Signs and Cerebellar and Basal Ganglia Syndromes
- 12.8. Alien Hand Syndrome
- 12.9. Apraxia

Module 13. Assessment

- 13.1. Medical History
- 13.2. Neuroimaging
 - 13.2.1. Structural
 - 13.2.2. Functional Criteria
- 13.3. Cranial Nerves
- 13.4. Pathological Reflexes
- 13.5. Muscular
 - 13.5.1. Osteotendinous Reflexes
 - 13.5.2. Tone
 - 13.5.3. Strength
- 13.6. Sensitivity
- 13.7. Coordination
- 13.8. Balance
- 13.9. March
- 13.10. Manipulation
- 13.11. Neurological Assessment Scales
 - 13.11.1. Writing the Report
- 13.12. Writing a Physiotherapy Report
 - 13.12.1. Interpretation of Medical Information

Module 14. Intervention

- 14.1. Acute, Subacute, and Chronic Stages in Acquired Brain Injury
- 14.2. Ease of Movement
- 14.3. Neurodynamics
- 14.4. *Mirror Therapy*
- 14.5. Approach in Context
- 14.6. Approach Oriented to the Task
- 14.7. Intensive Treatment
- 14.8. Constraint Induced Movement Therapy
- 14.9. Dry Needling for Spasticity
- 14.10. Therapeutic Exercise
- 14.11. Hydrotherapy
- 14.12. Electrotherapy
- 14.13. Robotics and Virtual Reality
- 14.14. Work Models
- 14.15. Pharmacology
- 14.16. Botulinum Toxin
- 14.17. Speech Therapy
- 14.18. Occupational Therapy
- 14.19. Cognitive Deficit Implications on Movement
- 14.20. Behavioral Disorders
- 14.21. Psychological Care for Patients and Their Family
- 14.22. Orthopedics

Module 15. Complications

- 15.1. Pain
- 15.2. Respiratory System
- 15.3. Epilepsy
- 15.4. Musculoskeletal Complications
- 15.5. Complications Associated with Spinal Cord Injury

Module 16. Acquired Brain Injury in Pediatrics

- 16.1. Typical Neurodevelopment
- 16.2. Examination
- 16.3. Neurological Assessment Scales
- 16.4. Physiotherapy
- 16.5. Other Healthcare Team Members
- 16.6. Educational Services

Module 17. Acquired Brain Injury in Altered States of Consciousness

- 17.1. Arousal and Awareness
- 17.2. Neuroanatomy and Neurophysiology
- 17.3. Neuroplasticity and Prognosis
- 17.4. Physical Examination
- 17.5. Neurological Assessment Scales
- 17.6. Pain
- 17.7. Physiotherapy
- 17.8. Team

Module 18. Acquired Brain Injury in Geriatrics

- 18.1. Pluripathology Advantages and Disadvantages Associated with Age
- 18.2. Physiotherapeutic Treatment and the Importance of Establishing Team Objectives
- 18.3. Adaptation to Surroundings
- 18.4. The Role of the Family and Legal Guardians
- 18.5. Technical Aids



You will be able to efficiently address common complications such as Spasticity, Contractures, and Balance Deficits"

04

Teaching Objectives

Through this program, Physiotherapy professionals will gain a comprehensive understanding of the fundamentals of Neurological Rehabilitation, enabling them to efficiently address a variety of motor, sensory, and cognitive disorders. Graduates will also acquire advanced clinical skills in functional assessment, the design of individualized plans, and the application of cutting-edge therapeutic procedures such as electrical stimulation and neuroplasticity. As a result, specialists will significantly enhance the quality of life for neurological patients.





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You will conduct comprehensive diagnostic evaluations to early detect a wide range of Neuromuscular and Postural Disorders”



General Objectives

- ♦ Delve into the fundamentals of Neuroscience applied to Neurodegenerative Diseases of the nervous system
- ♦ Develop a critical attitude that promotes the development of clinical practice based on the latest scientific evidence and clinical reasoning
- ♦ Provide an integrated treatment plan for patients based on their specific needs
- ♦ Design and implement personalized intervention plans focused on functional recovery and improving the quality of life for patients with Neurological Conditions
- ♦ Develop advanced clinical skills for the thorough evaluation of neurological patients, using sophisticated tools to identify motor, sensory, or cognitive impairments
- ♦ Strengthen competencies in managing Chronic and Acute Neurological Pathologies, covering everything from functional diagnosis to planning long-term maintenance programs





Specific Objectives

Module 1. Introduction to Neurodegenerative Diseases

- Delve thoroughly into the characteristics of the main Neurodegenerative Pathologies
- Optimally manage the different diagnostic methods to early identify the most common conditions

Module 2. Parkinson's Disease and Other Related Neurodegenerative Diseases (Progressive Supranuclear Palsy, Corticobasal Degeneration, Multiple Systemic Atrophy)

- Be capable of evaluating and treating the motor and postural impairments characteristic of these conditions, using specific functional assessment tools
- Acquire skills to design and implement personalized intervention plans focused on improving mobility, balance, and overall well-being of the patients

Module 3. Multiple Sclerosis

- Have a deep understanding of the pathophysiology and clinical characteristics of Multiple Sclerosis, including its different forms of presentation and progression
- Efficiently address associated clinical complications such as Fatigue, Spasticity, Neuropathic Pain, and Balance Disorders

Module 4. Amyotrophic Lateral Sclerosis

- Understand the pathophysiological, clinical, and progressive foundations of Amyotrophic Lateral Sclerosis, focusing on the motor and functional implications that affect individuals
- Develop personalized physiotherapy intervention plans aimed at maintaining mobility, preventing contractures, and improving the quality of life for individuals at different stages

Module 5. Huntington's Disease

- Delve into the pathophysiology and clinical characteristics of Huntington's Disease, considering its motor, cognitive, and behavioral implications
- Create programs focused on optimizing mobility, reducing rigidity, and preventing secondary complications from the progression of the disease

Module 6. Neuromuscular Diseases and Polyneuropathies

- Have a solid understanding of the clinical characteristics of the main Neuromuscular Diseases and Polyneuropathies, including Muscular Dystrophy
- Create intervention strategies focused on maintaining muscle strength and improving mobility

Module 7. Alzheimers Disease, and Other Neurodegenerative Dementias: Frontotemporal Dementia, Lewy Body Dementia, Vascular Dementia

- Gain advanced clinical skills for comprehensive functional assessment to identify the motor, postural, and cognitive impairments associated with different dementias
- Master the most innovative physical rehabilitation techniques, including exercise-based therapy and activities to stimulate motor coordination

Module 8. Degenerative Cerebellar Diseases: Hereditary Ataxias, Friedreich's Ataxia, and Machado-Joseph Ataxia

- Understand the pathophysiological and clinical foundations of Degenerative Cerebellar Diseases, with an emphasis on their impact on motor function and balance
- Develop methods focused on improving mobility and reducing falls to promote the functional independence of patients

Module 9. Neurodegenerative Diseases in Childhood

- ♦ Explore the pathophysiological specifics and clinical signs of the most common Neurodegenerative Diseases in children
- ♦ Create prevention strategies and manage complications such as Orthopedic Deformities, Spasticity, or Respiratory Disorders

Module 10. Neoplasms or Nervous System Tumors

- ♦ Deepen your understanding of the clinical characteristics of nervous system neoplasms and their functional impact on patients
- ♦ Design intervention programs focused on improving mobility, balance, and the overall well-being of patients

Module 11. Neuroanatomy and Neurophysiology

- ♦ Identify the main neural pathways and their function in motor, sensory, and autonomic integration
- ♦ Develop competencies in applying neuroplasticity principles for functional recovery, adapting physiotherapy interventions to the nervous system's ability to reorganize

Module 12. Acquired Brain Injury

- ♦ Analyze the pathophysiological and clinical foundations of Acquired Brain Injury and its consequences on both motor and cognitive functionality
- ♦ Create physiotherapy intervention plans aimed at functional recovery, improving quality of life, and reintegrating individuals into society

Module 13. Assessment

- ♦ Develop clinical skills to apply specific neurological assessment tools, such as gait and balance tests
- ♦ Be able to correctly interpret the results of complementary tests such as MRIs, functional imaging studies, and evoked potentials

Module 14. Intervention

- ♦ Optimally manage common motor impairments such as Muscle Weakness, Spasticity, or Ataxia
- ♦ Employ advanced neurological rehabilitation techniques such as postural re-education, functional electrical stimulation, and even aquatic therapies

Module 15. Complications

- ♦ Immediately detect the main complications linked to Acquired Brain Injury, including Gait Disorders and Muscle Contractures
- ♦ Gain competencies in addressing complications such as Respiratory Failure and Diaphragmatic Dysfunction through ventilatory training techniques

Module 16. Acquired Brain Injury in Pediatrics

- ♦ Explore the specific characteristics of Acquired Brain Injury in pediatric patients, as well as its impact on motor and cognitive development
- ♦ Familiarize yourself with innovative therapeutic treatments such as early stimulation, postural re-education, and aquatic physiotherapy



Module 17. Acquired Brain Injury in Altered States of Consciousness

- ♦ Understand the pathophysiological foundations of altered states of consciousness, such as the vegetative state, minimally conscious state, and Locked-In Syndrome
- ♦ Master cutting-edge strategies focused on postural management and passive mobilization to prevent complications such as Pressure Ulcers or Musculoskeletal Deformities

Module 18. Acquired Brain Injury in Geriatrics

- ♦ Be able to holistically assess motor, sensory, postural, and cognitive impairments in older patients with Acquired Brain Injury
- ♦ Design and implement personalized physiotherapy intervention plans that promote functional independence and improve the quality of life for elderly individuals



Acquire an interdisciplinary approach to managing neurological patients, ensuring they receive a holistic treatment that enhances their long-term well-being”

05 Career Opportunities

Upon completing this program, physiotherapists will gain a holistic understanding of the most innovative techniques in neurological rehabilitation. In line with this, they will acquire advanced clinical competencies to optimally address motor, sensory, and cognitive impairments in patients with various nervous system pathologies. Graduates will also be capable of designing personalized interventions that promote functional recovery and enhance the quality of life for individuals. Thanks to this specialized approach, professionals will expand their career opportunities and be prepared to lead multidisciplinary teams in the field of Neurorehabilitation.



“

Do you want to work professionally as a Director of Neurological Rehabilitation? This university qualification will provide you with the key skills to achieve this in just a few months”

Graduate Profile

The graduate of this university program is a highly skilled professional capable of addressing the needs of patients with various Neurological Conditions. At the same time, they master advanced rehabilitation techniques, functional assessment, and neuroplasticity. In this regard, they are highly prepared to create personalized therapeutic interventions, work closely with multidisciplinary teams, and promote the holistic recovery of patients to significantly improve their quality of life.

You will ensure accessibility and integration for people with diverse neurological conditions in various social and work environments.

- ♦ **Patient and Clinical Environment Management:** Graduates acquire the ability to organize and prioritize therapeutic interventions efficiently, optimizing time and resources in both clinical and home settings
- ♦ **Critical Thinking and Clinical Problem Solving:** Physiotherapists are capable of analyzing complex situations associated with neurological diseases, identifying functional problems, and proposing innovative solutions based on scientific evidence to improve therapeutic outcomes.
- ♦ **Digital Competence in Neurological Rehabilitation:** In the current context, it is essential for professionals to handle sophisticated technological tools such as robotic devices, telemedicine platforms, and virtual reality systems to enhance recovery and monitor patient progress.
- ♦ **Effective Therapeutic Communication:** Specialists develop the skills to communicate clearly and empathetically with both patients and their families, adapting their language to the emotional and cognitive needs of each case. This fosters a relationship based on trust and collaboration.



After completing the Advanced Master's Degree, you will be able to perform your knowledge and skills in the following positions:

- 1. Specialized Neurological Physiotherapist:** Their role focuses on designing and implementing personalized intervention plans for patients with neurological pathologies, significantly improving their functionality and quality of life.
- 2. Expert in Neurological Rehabilitation:** Responsible for supervising and coordinating multidisciplinary teams in neurological rehabilitation centers, ensuring comprehensive treatment based on scientific evidence.
- 3. Physiotherapist in Acquired Brain Injury:** Specialist in the functional rehabilitation of patients with traumatic brain injuries or brain anoxia; addressing motor, postural, and respiratory impairments associated with these conditions.
- 4. Consultant in Neurological Rehabilitation Technologies:** Focuses on the use of advanced technologies such as exoskeletons, functional electrical stimulation systems, and virtual reality to enhance neurological recovery.
- 5. Consultant in Multidisciplinary Rehabilitation Units:** A professional who collaborates with healthcare teams to design comprehensive neurological rehabilitation programs tailored to the specific needs of individuals.
- 6. Specialized Geriatric Neurological Rehabilitation Professional:** Their work consists of providing treatments to elderly patients with chronic neurological diseases (such as Parkinson's, Alzheimer's, and other dementias), focusing on mobility and fall prevention.
- 7. Neurorehabilitation Researcher:** Dedicated to scientific research in neurological physiotherapy, developing new therapeutic strategies and evaluating their impact on patients.
- 8. Pediatric Neurological Physiotherapist:** Specialized in the management of children with neurological disorders such as Cerebral Palsy, using innovative early stimulation techniques and motor rehabilitation.

9. Consultant in Neurological Inclusion and Accessibility Programs: Develops cutting-edge strategies to ensure accessibility and integration for individuals with neurological conditions in various social and even professional settings.

10. Physiotherapist in Neurological Intensive Care Units: A professional who works on the management of critically ill patients with neurological damage, including respiratory intervention and prevention of motor complications.



You will develop the most effective strategies to help elderly patients with chronic neurological diseases prevent falls and significantly optimize their mobility”

06 Study Methodology

TECH is the world's first university to combine the **case study** methodology with **Relearning**, a 100% online learning system based on guided repetition.

This disruptive pedagogical strategy has been conceived to offer professionals the opportunity to update their knowledge and develop their skills in an intensive and rigorous way. A learning model that places students at the center of the educational process giving them the leading role, adapting to their needs and leaving aside more conventional methodologies.



“

TECH will prepare you to face new challenges in uncertain environments and achieve success in your career”

The student: the priority of all TECH programs

In TECH's study methodology, the student is the main protagonist.

The teaching tools of each program have been selected taking into account the demands of time, availability and academic rigor that, today, not only students demand but also the most competitive positions in the market.

With TECH's asynchronous educational model, it is students who choose the time they dedicate to study, how they decide to establish their routines, and all this from the comfort of the electronic device of their choice. The student will not have to participate in live classes, which in many cases they will not be able to attend. The learning activities will be done when it is convenient for them. They can always decide when and from where they want to study.

“

*At TECH you will NOT have live classes
(which you might not be able to attend)”*



The most comprehensive study plans at the international level

TECH is distinguished by offering the most complete academic itineraries on the university scene. This comprehensiveness is achieved through the creation of syllabi that not only cover the essential knowledge, but also the most recent innovations in each area.

By being constantly up to date, these programs allow students to keep up with market changes and acquire the skills most valued by employers. In this way, those who complete their studies at TECH receive a comprehensive education that provides them with a notable competitive advantage to further their careers.

And what's more, they will be able to do so from any device, pc, tablet or smartphone.

“*TECH's model is asynchronous, so it allows you to study with your pc, tablet or your smartphone wherever you want, whenever you want and for as long as you want*”

Case Studies and Case Method

The case method has been the learning system most used by the world's best business schools. Developed in 1912 so that law students would not only learn the law based on theoretical content, its function was also to present them with real complex situations. In this way, they could make informed decisions and value judgments about how to resolve them. In 1924, Harvard adopted it as a standard teaching method.

With this teaching model, it is students themselves who build their professional competence through strategies such as Learning by Doing or Design Thinking, used by other renowned institutions such as Yale or Stanford.

This action-oriented method will be applied throughout the entire academic itinerary that the student undertakes with TECH. Students will be confronted with multiple real-life situations and will have to integrate knowledge, research, discuss and defend their ideas and decisions. All this with the premise of answering the question of how they would act when facing specific events of complexity in their daily work.



Relearning Methodology

At TECH, case studies are enhanced with the best 100% online teaching method: Relearning.

This method breaks with traditional teaching techniques to put the student at the center of the equation, providing the best content in different formats. In this way, it manages to review and reiterate the key concepts of each subject and learn to apply them in a real context.

In the same line, and according to multiple scientific researches, reiteration is the best way to learn. For this reason, TECH offers between 8 and 16 repetitions of each key concept within the same lesson, presented in a different way, with the objective of ensuring that the knowledge is completely consolidated during the study process.

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.



A 100% online Virtual Campus with the best teaching resources

In order to apply its methodology effectively, TECH focuses on providing graduates with teaching materials in different formats: texts, interactive videos, illustrations and knowledge maps, among others. All of them are designed by qualified teachers who focus their work on combining real cases with the resolution of complex situations through simulation, the study of contexts applied to each professional career and learning based on repetition, through audios, presentations, animations, images, etc.

The latest scientific evidence in the field of Neuroscience points to the importance of taking into account the place and context where the content is accessed before starting a new learning process. Being able to adjust these variables in a personalized way helps people to remember and store knowledge in the hippocampus to retain it in the long term. This is a model called Neurocognitive context-dependent e-learning that is consciously applied in this university qualification.

In order to facilitate tutor-student contact as much as possible, you will have a wide range of communication possibilities, both in real time and delayed (internal messaging, telephone answering service, email contact with the technical secretary, chat and videoconferences).

Likewise, this very complete Virtual Campus will allow TECH students to organize their study schedules according to their personal availability or work obligations. In this way, they will have global control of the academic content and teaching tools, based on their fast-paced professional update.



The online study mode of this program will allow you to organize your time and learning pace, adapting it to your schedule”

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 assess 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.

The university methodology top-rated by its students

The results of this innovative teaching model can be seen in the overall satisfaction levels of TECH graduates.

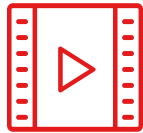
The students' assessment of the teaching quality, the quality of the materials, the structure of the program and its objectives is excellent. Not surprisingly, the institution became the top-rated university by its students according to the global score index, obtaining a 4.9 out of 5.

Access the study contents from any device with an Internet connection (computer, tablet, smartphone) thanks to the fact that TECH is at the forefront of technology and teaching.

You will be able to learn with the advantages that come with having access to simulated learning environments and the learning by observation approach, that is, Learning from an expert.



As such, the best educational materials, thoroughly prepared, will be available in this program:



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.

This content is then adapted in an audiovisual format that will create our way of working online, with the latest techniques that allow us to offer you high quality in all of the material that we provide you with.



Practicing Skills and Abilities

You will carry out activities to develop specific competencies and skills in each thematic field. Exercises and activities to acquire and develop the skills and abilities that a specialist needs to develop within the framework of the globalization we live in.



Interactive Summaries

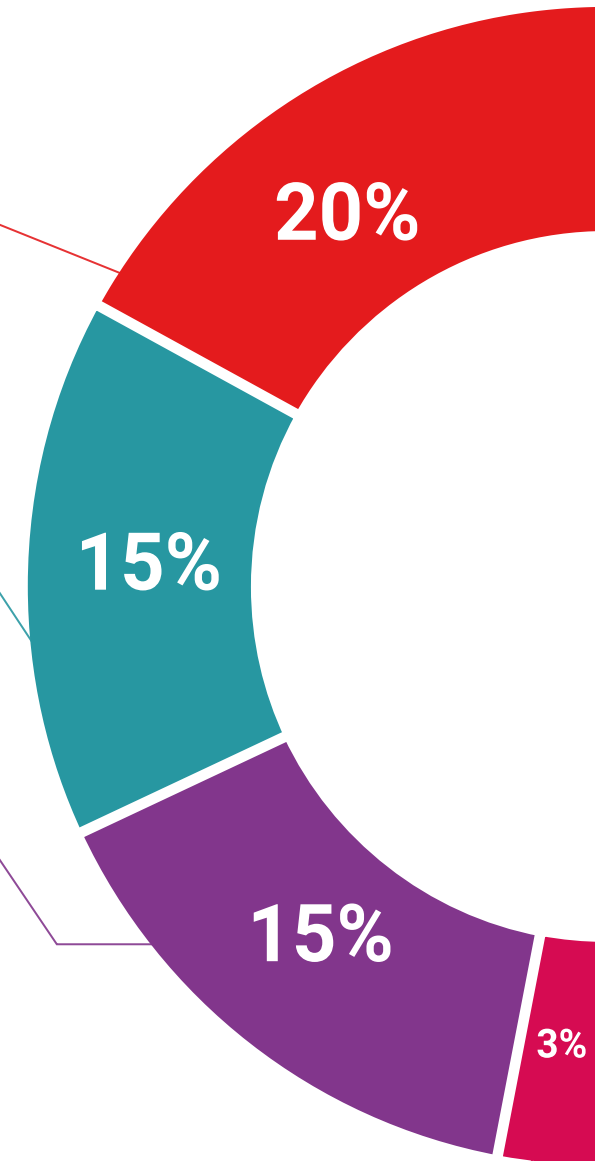
We present the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

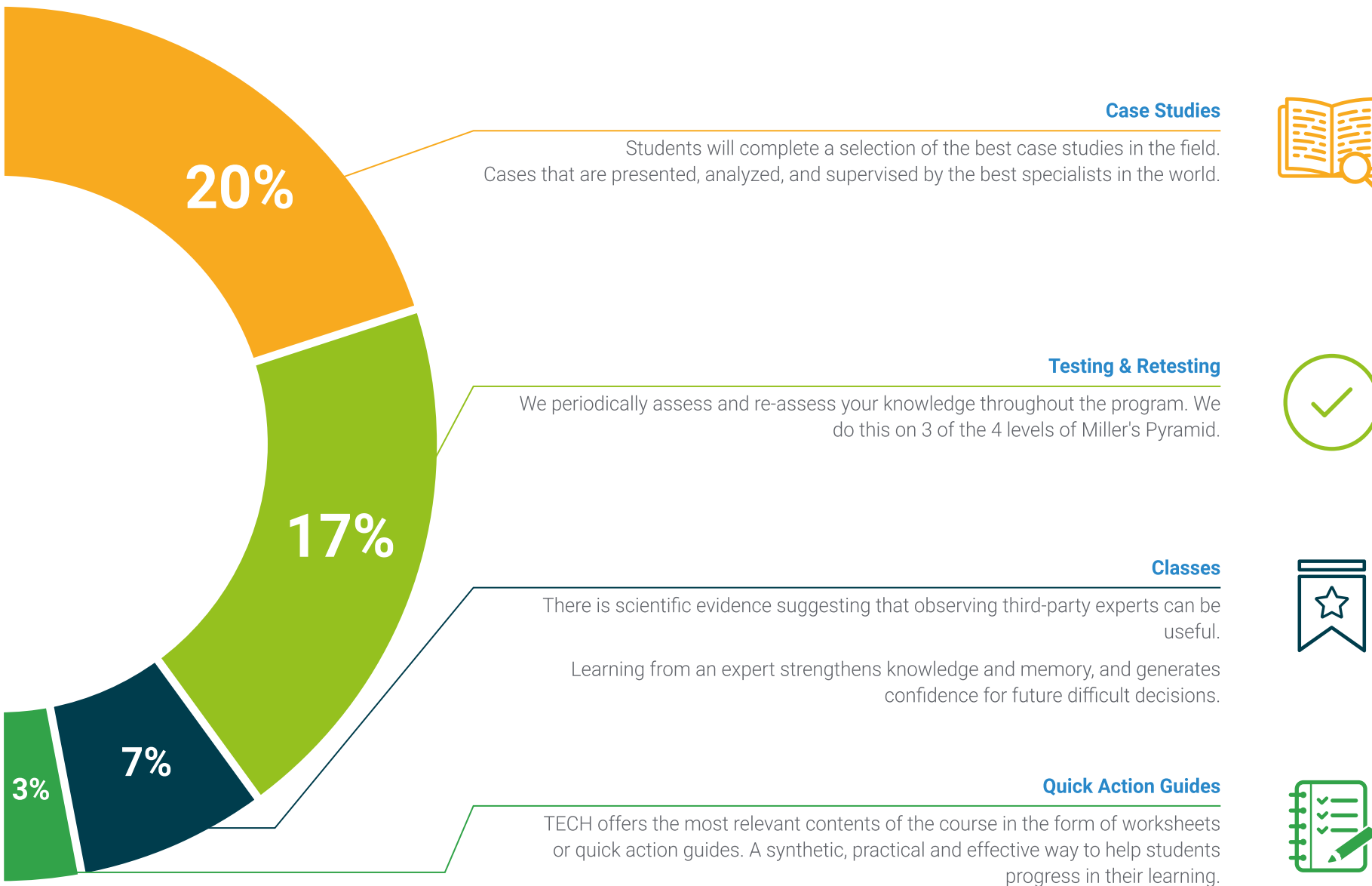
This exclusive educational system for presenting multimedia content was awarded by Microsoft as a "European Success Story".



Additional Reading

Recent articles, consensus documents, international guides... In our virtual library you will have access to everything you need to complete your education.





07

Teaching Staff

The fundamental premise of TECH is to offer the most comprehensive and up-to-date university programs in the academic landscape. To achieve this, a thorough process is carried out to establish each of its teaching staff. As a result, this program features the participation of the best specialists in the field of Neurological Physiotherapy. These professionals have extensive work experience, during which they have significantly enhanced the quality of life of numerous patients. In this way, graduates are assured the guarantees they need to embark on an intensive experience that will enable them to make a remarkable leap in their careers as physiotherapists.





“

You will have the support of a highly specialized teaching team in Neurological Physiotherapy, who will introduce you to the latest advancements in this field”

Management



Mr. Pérez Redondo, José María

- Physiotherapist at San Carlos Clinical Hospital
- Supervisor in the Rehabilitation Area at the Fuenfría Hospital
- Supervisor in the Rehabilitation Area at the Fuenlabrada Hospital
- Supervisor in the Rehabilitation Area at the Puerta de Hierro University Hospital
- Stroke Committee at the Puerta de Hierro University Hospital - Majadahonda
- Breast Cancer Tumor Committee at the Fuenlabrada University Hospital
- Founding Partner of the Pérez and Silveria Physiotherapy Practice
- Associate Lecturer at the Complutense University of Madrid
- Specialist in Neurology and Neurosurgery for Acute and Critical Patients
- Degree in Physiotherapy from the European University of Madrid
- Master's Degree in Advanced Manual Therapy from the Complutense University of Madrid
- Diploma in Physiotherapy from the School of Physiotherapy, Podiatry and Nursing at the Complutense University of Madrid

Professors

Ms. Jiménez Cubo, Alba

- ♦ Specialist Physiotherapist in Neurorehabilitation
- ♦ Physiotherapist in Neurorehabilitation at the Step by Step Foundation, Hospitalet de Llobregat
- ♦ Physiotherapist in Neurorehabilitation at Sinapse Functional Recovery Torrelavega
- ♦ Training and Research at Mbodycr
- ♦ Supervision of Final Degree Projects at Gimbernat University Schools, Torrelavega, Spain
- ♦ Degree in Physiotherapy from Gimbernat University School of Physiotherapy
- ♦ Master's Degree in Neurological Stimulation from the University of Vic
- ♦ Official Master's Degree in Neuroscience: Neurorehabilitation from Rovira i Virgili University
- ♦ Quantitative Sensory Testing Training from Heidelberg University
- ♦ Explain Pain Course by NOI. UK
- ♦ Functional Therapeutic Movement with Ben Cormack at the Inspira Center
- ♦ Member of: Catalan-Balearic Society of Physiotherapy (SCBF) and Catalan Society of Neurology (SCN)

Ms. Sánchez Palomares, Raquel

- ♦ Specialist Physiotherapist in Neurology
- ♦ Director and Physiotherapist at the Neurofis Rehabilitation Center
- ♦ Physiotherapist at ENCEFIS
- ♦ Bobath Technique Instructor
- ♦ Diploma in Physiotherapy from the Pontifical University of Comillas

Dr. Rodríguez López, Carlos

- ♦ Specialist Physiotherapist in Neurorehabilitation
- ♦ CEO of Mbody
- ♦ Cofounder of Sinapse Neurología
- ♦ Consultant for Multidisciplinary Teams in Acquired Brain Injury at Kurhus, Denmark
- ♦ Doctorate in Specialization in the Mechanical Influence of the Peripheral Nerve in Brain Injury from the University of A Coruña
- ♦ Degree in Physiotherapy from the University of A Coruña
- ♦ Master's Degree in Management and Research in Dependency
- ♦ Expert in Neurological Physiotherapy from the University of A Coruña

Ms. Casanueva Pérez, Carolina

- ♦ Physiotherapist in the Neonatology and Pediatrics Unit in Hospitalization and Pediatric Physiotherapist at the Clinical Hospital of San Carlos
- ♦ Coauthor of Physiotherapy Protocols at the Clinical Hospital of San Carlos
- ♦ Neurological Physiotherapist at the Disability Center
- ♦ Physiotherapist from UCM
- ♦ CO in Osteopathy from EOM
- ♦ University Expert in Sports Physiotherapy from UCM
- ♦ University Expert in Advanced Manual Therapy from UCM
- ♦ University Expert in Neurological Physiotherapy from UCM

Ms. Hermida Rama, Josefa

- ♦ Physiotherapist in the Rehabilitation Service at the Clinical Hospital of San Carlos
- ♦ Associate Professor of Clinical Placements at the Faculty of Nursing, Physiotherapy, and Podiatry
- ♦ Graduate in Physiotherapy from the Faculty of Nursing, Physiotherapy, and Podiatry at UCM
- ♦ Expert in Neurological Physiotherapy University School of Nursing, Physiotherapy, and Podiatry from UCM
- ♦ Advanced Course in Basic Study for the Functional Recovery of the Arm and Hand in Adult Neurological Patients using the Bobath Concept

Mr. Almirón Taborga, Marcos

- ♦ Specialist Physiotherapist in Neurorehabilitation
- ♦ Coordinator of Integral Treatment in Sinapse Cantabria
- ♦ Head of Development at Mbody
- ♦ Teacher in the Degree in Physiotherapy in the University Schools Gimbernat Cantabria
- ♦ Graduate in Physiotherapy at the University School of Physiotherapy Gimbernat
- ♦ Diploma in Physiotherapy from the Gimbernat University School of Physiotherapy - Cantabria
- ♦ Master's Degree in Advances in Neurorehabilitation from the Gimbernat University School of Physiotherapy - Cantabria
- ♦ Member of: Spanish Society of Physiotherapy and Pain, Neurophysiotherapy Section of the SEN (Spanish Society of Neurology) and Neurophysiotherapy Section of the SEN (Spanish Society of Neurology)





“

A unique, essential and decisive learning experience to boost your professional development”

08 Certificate

The Advanced Master's Degree in Neurological Physiotherapy guarantees students, in addition to the most rigorous and up-to-date education, access to a Postgraduate Certificate issued by TECH Global University.



“

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

This private qualification will allow you to obtain a **Advanced Master's Degree in Neurological Physiotherapy** endorsed by **TECH Global University**, the world's largest online university.

TECH Global University is an official European University publicly recognized by the Government of Andorra ([official bulletin](#)). Andorra is part of the European Higher Education Area (EHEA) since 2003. The EHEA is an initiative promoted by the European Union that aims to organize the international training framework and harmonize the higher education systems of the member countries of this space. The project promotes common values, the implementation of collaborative tools and strengthening its quality assurance mechanisms to enhance collaboration and mobility among students, researchers and academics.

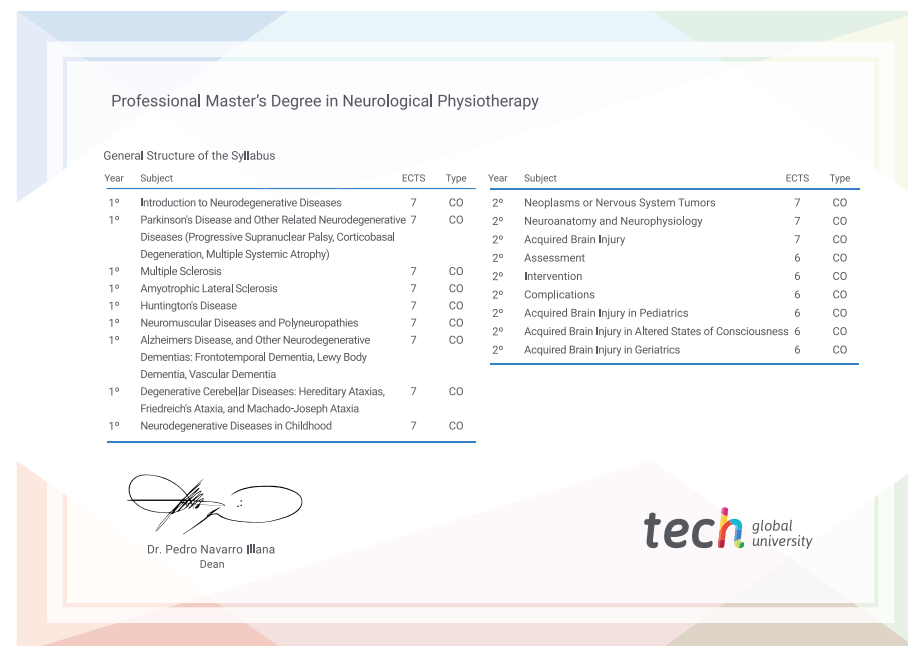
This **TECH Global University** private qualification is a European program of continuing education and professional updating that guarantees the acquisition of competencies in its area of knowledge, providing a high curricular value to the student who completes the program.

Title: **Professional Master's Degree in Neurological Physiotherapy**

Modality: **online**

Duration: **2 years**

Accreditation: **120 ECTS**





Advanced Master's
Degree
Neurological Physiotherapy

- » Modality: online
- » Duration: 2 years
- » Certificate: TECH Global University
- » Credits: 120 ECTS
- » Schedule: at your own pace
- » Exams: online

Advanced Master's Degree Neurological Physiotherapy

