# Postgraduate Certificate

Electroneuromyography (ENMG)

Protocols for Neuromuscular

Disease Diagnosis





Electroneuromyography (ENMG) Protocols for Neuromuscular Disease Diagnosis

» Modality: online

» Duration: 2 years

» Certificate: TECH Global University

» Accreditation: 150 ECTS

» Schedule: at your own pace

» Exams: online

Website: www.techtitute.com/us/medicine/postgraduate-certificate/electroneuromyography-enmg-protocols-neuromuscular-disease-diagnosis

# Index

 $\begin{array}{c|c} 01 & 02 \\ \hline & & \\ \hline &$ 

06 Certificate

p. 28

# 01 Introduction

Electroneuromyography is specially designed to diagnose pathologies of the peripheral nervous system. This test should detect lesions and provide accurate data about the pathophysiology of the damage, assessing the degree of damage and how far it has progressed. With this in mind, this program aims to provide the physician with the most up-to-date and comprehensive knowledge arising from the findings of neurophysiological studies on the different neuromuscular disorders and how to diagnose them following the best and most up-to-date protocols. This knowledge will be acquired completely online, giving the physician the opportunity to study without giving up the rest of their daily commitments.





## tech 06 | Introduction

Throughout this course, findings from neurophysiological studies on the different neuromuscular disorders and the most appropriate ways to diagnose them following the best and most up-to-date protocols will be discussed, keeping in mind their potential prognostic use.

Additionally, students will learn about the special considerations for pediatric patients and patients in Intensive Care Units. All this will be covered in an intensive and cutting-edge way. The teaching is accompanied by graphic and audiovisual support: clinical cases and videos that will undoubtedly provide the student with real and contextual learning.

This is a fully online program, giving physicians the possibility to study at their own pace, wherever and whenever they want. In addition, and thanks to TECH's academic resources, the student will be able to graduate directly and after only 6 weeks of intensive study.

#### This Postgraduate Certificate in Electroneuromographic (ENMG) Protocols for

**Neuromuscular Disease Diagnosis** contains the most complete and up-to-date educational program on the market. Its most notable features are:

- Practical cases studies presented by medical experts in neurophysiology
- Graphic, schematic, and practical contents which provide scientific and practical information on the disciplines that are essential for professional practice.
- Practical exercises where self-assessment can be undertaken to improve learning
- A special emphasis on innovative 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



With TECH, your educational process will be totally immersive: you will have theoretical material, videos of clinical cases and interactive resources"



Updating your knowledge and specializing in a growing medical field has never been easier. Study at TECH and see for yourself"

The program's teaching staff includes professionals from the sector who pour their professional experience into this program, as well as renowned specialists from leading societies and prestigious universities.

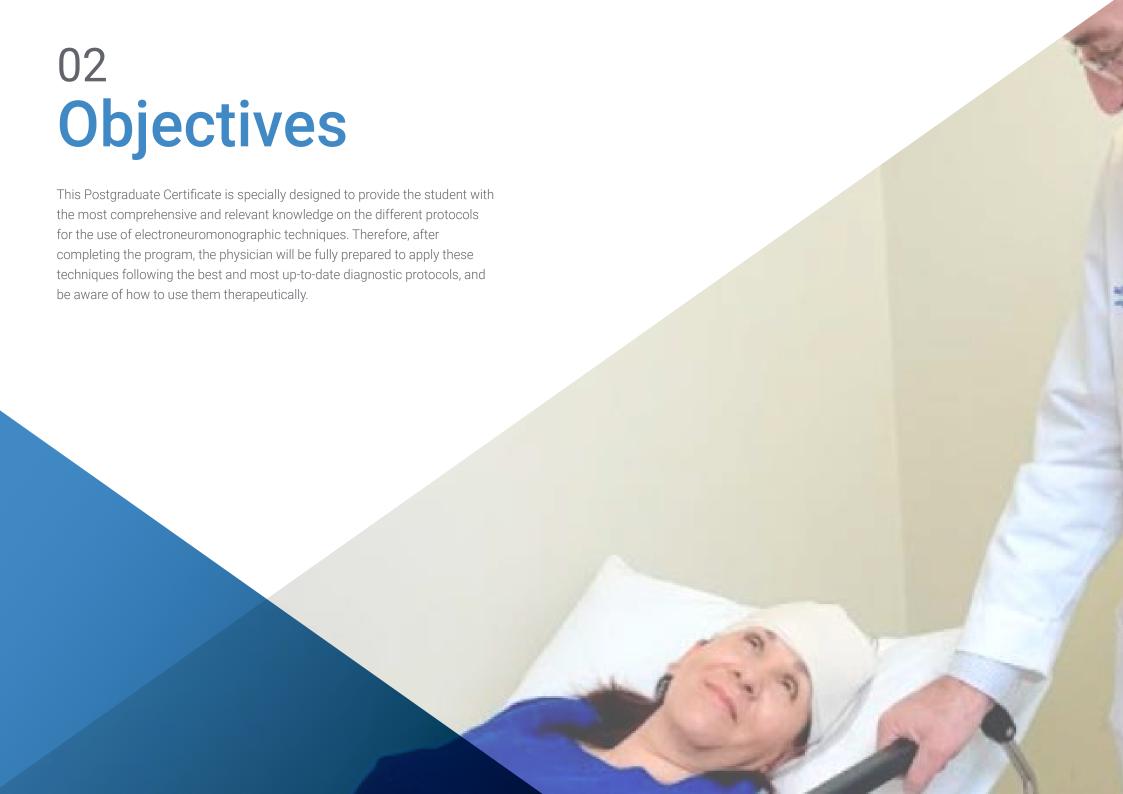
The multimedia content, developed with the latest educational technology, will provide the professional with situated and contextual learning, i.e., a simulated environment that will provide immersive learning designed for real situations.

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

Trust in the reliability of the leading online education provider, trust in TECH Technology University.

Learn how to diagnose your patients thanks to the electroneuromonography protocols and become a much more skilled physician.







## tech 10 | Objectives



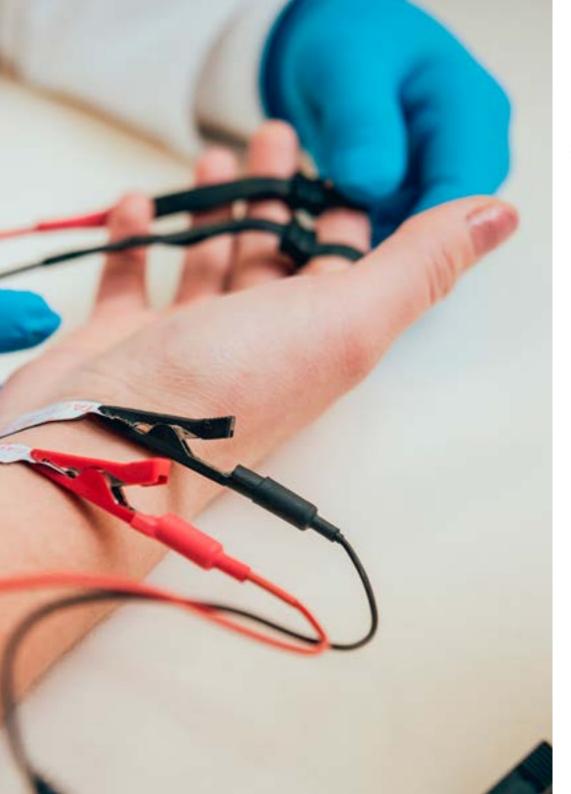
## **General Objectives**

- Obtain an up-to-date overview of neurophysiological diagnosis and its related areas, which allows the acquisition of useful and up-to-date expertise which is in line with international standards.
- Generate a desire to broaden knowledge and apply what has been learned to daily practice, for the development of new diagnostic techniques and related research.



Thanks to this program, you will learn about a range of specific electrodiagnostic methods, and you will become a much more skilled physician"





## Objectives | 11 tech



## **Specific Objectives**

- Develop a logical approach to conventional Clinical Neurophysiology techniques for the evaluation of specific or generalized neuromuscular disorders, neuromuscular junction disorders, including single fiber EMG
- Study the clinical and electrodiagnostic results for focal neuropathies, plexopathies, cervical and lumbosacral radiculopathies
- Take an electrodiagnostic approach to a broad spectrum of neuromuscular disorders, including myopathies, ALS, motor neuronopathies and polyneuropathies of different nature
- Provide effective guidance based on neurophysiological findings in the diagnosis of motor plaque diseases and their clinical correlates
- Gain knowledge of specific electrodiagnostic methods
- Explore the particular insights provided by electroneuromyographic studies for pediatric patients and intensive care units





## tech 14 | Course Management

### Management



#### Dr. Martínez Pérez, Francisco

- Clinical Neurophysiology Service. Puerto de Hierro University Hospital, Majadahonda
- Advanced neurophysiological studies at the MIP Health Clinic Personalized Integrated Medicine
- Neurophysiology techniques applied at the Vitruvian Institute of Biomechanics and Surgery.
- Medical Specialist in Clinical Neurophysiology
- Degree in Medicine and Surgery from the Complutense University of Madrid
- Master's Degree in Sleep: Physiology and Pathology, Pablo Olavide University.
- Master's Degree in Neurological Electrodiagnosis by the University of Barcelona.
- Researcher, university lecturer, professor of the Master's Degree in Sleep Medicine.
- Author of several guidelines and consensuses for different medical societies (SENFC, SES, AEP) and the National Commission of the Specialty.
- XXI Century National Prize in Medicine
- European Award in Medicine



## Course Management | 15 tech

#### **Professors**

#### Dr. López Gutiérrez, Inmaculada

- Head of the Clinical Neurophysiology Department, Rey Juan Carlos, Infanta Elena, General de Villalba and Jiménez Diaz Foundation Hospitals
- Degree in Medicine from the University of Granada
- Official Master's Degree in Neurosciences from the University of Seville
- Expert in Sleep Medicine by the Spanish Committee of Accreditation in Sleep Medicine (CEAMS).
- Somnologist Postgraduate Diploma in Sleep Medicine, European Sleep Research Society (ESRS)
- Co-President of the Multidisciplinary Sleep Unit, Rey Juan Carlos University Hospital
- Member of the Spanish Andalusian Society of Clinical Neurophysiology
- Member of the Spanish Sleep Society and its Pediatric Working Group
- Member of the European Sleep Research Society

#### Dr. Martínez Aparicio, Carmen

- Coordinator of the Clinical Neurophysiology Unit at Hospital Vithas, Almeria and FEA of Clinical Neurophysiology at Torrecárdenas University Hospital, Almeria
- Current president of the Andalusian Society of Clinical Neurophysiology (SANFC)
- Degree in Medicine and Surgery from the University of Granada
- Master's Degree in Sleep from the Pablo Olavide University
- Expert in Musculoskeletal Ultrasound Francisco de Vitoria University





## tech 18 | Structure and Content

## **Module 1.** Electroneuromyography (ENMG) Protocols for Neuromuscular Disease Diagnosis

- 1.1. Neurophysiological Study in Pathology of the Cervical Roots and Brachial Plexus
- 1.2. Neurophysiological Study in Pathology of Roots and Lumbosacral Plexus
- 1.3. Neurophysiological Examination of Upper Limb Nerve Pathology Mononeuropathies and Focal Lesions
  - 1.3.1. Median Nerve
  - 1.3.2. Ulnar Nerve
  - 1.3.3. Radial Nerve
  - 1.3.4. Shoulder Girdle Nerves
  - 1.3.5. Others
- 1.4. Neurophysiological Examination of Lower Limb Nerve Pathology Mononeuropathies and Focal Lesions
  - 1.4.1. Sciatic (Ischiadic) Nerve
  - 1.4.2. Femoral Nerve
  - 1.4.3. Obturator Nerve
  - 1.4.4. Others
- 1.5. Neurophysiological Examination of Polyneuropathies
- Neurophysiological Examination of Myopathies Muscular Dystrophies, Myotonias and Channelopathies
- 1.7. Neurophysiological Assessment of Motor Neuron Diseases
- 1.8. Clinical-Neurophysiological Correlation of Neuromuscular Transmission Disorders
  - 1.8.1. Myasthenia Gravis
  - 1.8.2. Lamber-Eaton Syndrome
  - 1.8.3. Botulism
  - 1.8.4. Others
- 1.9. Neurophysiological Study of Tremor and Other Movement Disorders
- 1.10. Neurophysiological Assessment of Neuromuscular Pathology in Pediatrics

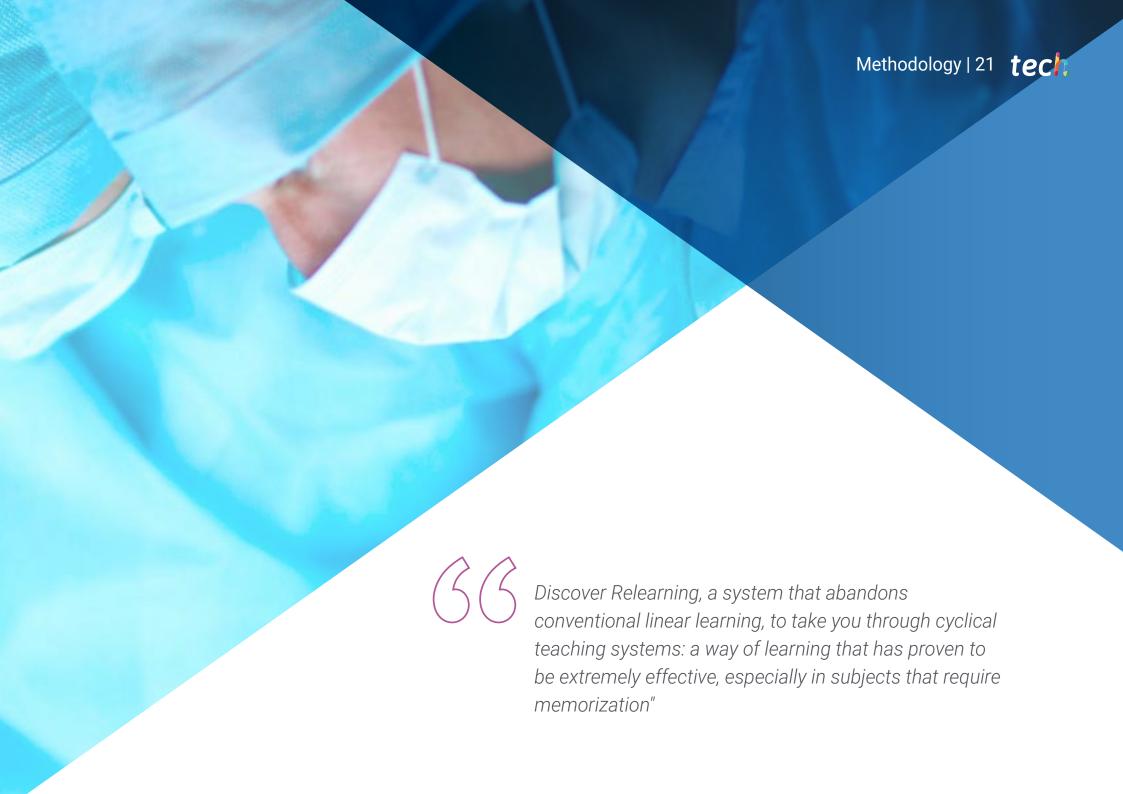






High-quality content prepared for a high-quality professional: you"





## tech 22 | Methodology

#### 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 this method. Specialists learn better, faster, and more sustainably over time.

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



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



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

- 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.





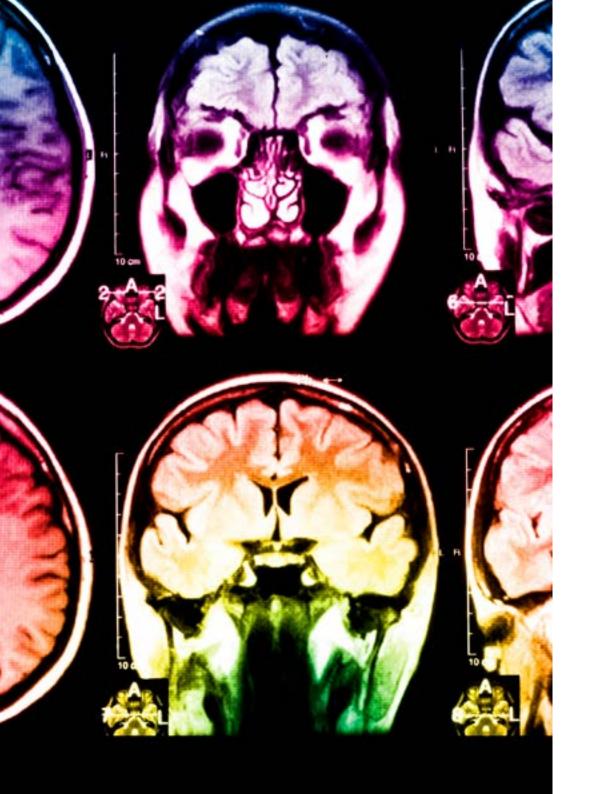
### Relearning Methodology

TECH effectively combines the Case Study methodology with a 100% online learning system based on repetition, which combines 8 different teaching elements in each lesson.

We enhance the Case Study with the best 100% online teaching method: Relearning.

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





## Methodology | 25 tech

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 specialisms 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 results, involving you more in your studies, developing a critical mindset, defending arguments, and contrasting opinions: a direct route 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 adapted in audiovisual format, to create the TECH online working method. All this, with the latest techniques that offer high-quality pieces in each and every one of the materials that are made available to the student.



#### **Surgical Techniques and Procedures on Video**

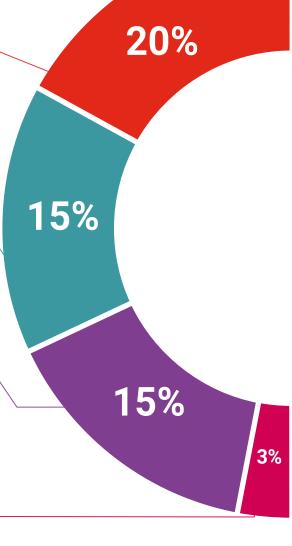
TECH introduces students to the latest techniques, the latest educational advances and to the forefront of current medical techniques. All of this in direct contact with students and explained in detail so as to aid their assimilation and understanding. And best of all, you can watch the videos as many times as you like.



#### **Interactive Summaries**

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

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





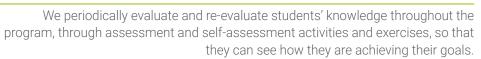
#### **Additional Reading**

Recent articles, consensus documents and international guidelines, among others. In TECH's virtual library, students will have access to everything they need to complete their course.

Expert-Led Case Studies and Case Analysis

Effective learning ought to be contextual. Therefore, TECH presents real cases in which the expert will guide students, focusing on and solving the different situations: a clear

**Testing & Retesting** 



and direct way to achieve the highest degree of understanding.



Classes

There is scientific evidence on the usefulness of learning by observing experts.

The system known as Learning from an Expert strengthens knowledge and memory, and generates confidence in future difficult decisions.



**Quick Action Guides** 

TECH offers the most relevant contents of the course in the form of worksheets or quick action guides. A synthetic, practical and effective way to help students progress in their learning.



17% 7%





## tech 30 | Certificate

This Postgraduate Certificate in Electroneuromography (ENMG) Protocols for Neuromuscular Disease Diagnosis contains the most complete and up-to-date scientific program on the market.

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

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

Title: Postgraduate Certificate in Electroneuromyography (ENMG) Protocols for Neuromuscular Disease Diagnosis

Modality: online

Duration: 2 years

Accreditation: 150 ECTS



Mr./Ms. \_\_\_\_\_, with identification document \_\_\_\_\_ has successfully passed and obtained the title of:

#### Postgraduate Certificate in Electroneuromyography (ENMG) Protocols for Neuromuscular Disease Diagnosis

This is a private qualification of 150 hours of duration equivalent to 6 ECTS, with a start date of dd/mm/yyyy and an end date of dd/mm/yyyy.

TECH Global University is a university officially recognized by the Government of Andorra on the 31st of January of 2024, which belongs to the European Higher Education Area (EHEA).

In Andorra la Vella, on the 28th of February of 2024



health confidence people
education information tutors
guarantee accreditation teaching
institutions technology learning



## Postgraduate Certificate

Electroneuromyography (ENMG) Protocols for Neuromuscular Disease Diagnosis

- » Modality: online
- » Duration: 2 years
- » Certificate: TECH Global University
- » Accreditation: 150 ECTS
- » Schedule: at your own pace
- » Exams: online

