

# Postgraduate Certificate

## Neuroanatomy and Neurophysiology for Rehabilitation Physicians





## Postgraduate Certificate Neuroanatomy and Neurophysiology for Rehabilitation Physicians

Course Modality: **Online**

Duration: **6 weeks**

Certificate: **TECH Technological University**

Official N° of Hours: **100 h.**

Website: [www.techtute.com/us/medicine/postgraduate-certificate/neuroanatomy-neurophysiology-rehabilitation-physicians](http://www.techtute.com/us/medicine/postgraduate-certificate/neuroanatomy-neurophysiology-rehabilitation-physicians)

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# 01

# Introduction

In recent times, due to advances in their field, rehabilitation physicians have seen how they must be constantly and permanently up to date. The increase in the incidence of Acquired Brain Injury (ABI), especially stroke, and the survival of the patient, make Neurorehabilitation and Physiotherapy an indispensable tool that requires highly qualified professionals





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*This program in Neuroanatomy and Neurophysiology for Rehabilitation Physicians, gives a sense of confidence in the performance of your profession, which will help you grow personally and professionally”*

Stroke is currently the leading cause of disability. This, coupled with the public's awareness of the need for specialized professionals, is leading to an increase in the demand for physiotherapists who are able to understand how the nervous system works after an injury and how to get the most out of it to minimize the after-effects of the injury.

In addition, we are living in an era of great advances in the field of neuroscience, as well as Physiotherapy as a science, which forces us to have to update our knowledge both about the functioning of the nervous system, as well as how to evaluate and therapeutically approach a person with ACD, since each injury is different and will manifest itself in a different way in each patient.

This course aims to be a compendium of the most up-to-date evidence and scientific knowledge about the nervous system and its rehabilitation when it is injured in a supervening way. As a result, it is a program capable of specializing the rehabilitation physician who has never dealt with people with ACD and, nevertheless, is interested in having his or her professional future related to this type of patient.

Likewise, the professional who is already a Rehabilitation Physician, whether or not dealing with ACD, will find a space to update their knowledge and become highly specialized in this group of patients.

On the other hand, by understanding so much information about neuroscience and functionality, it can be a useful tool for the Rehabilitation Physician who needs to know the ins and outs of the nervous system to better understand and address the injury or therapeutic need in a general way.

This **Postgraduate Certificate in Neuroanatomy and Neurophysiology for Rehabilitation Physicians** contains the most complete and up-to-date scientific program on the market. The most important features of the course are:

- Development of case studies presented by experts in Neuroanatomy and Neurophysiology for Rehabilitation Physicians
- 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
- Neuroanatomy and Neurophysiology for Rehabilitation Physicians at a Glance
- It contains practical exercises where the self-evaluation process can be carried out to improve learning
- With special emphasis on innovative methodologies in Neuroanatomy and Neurophysiology for Rehabilitation Physicians
- All of this will be complemented by 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



*Update your knowledge through the Postgraduate Certificate program in Neuroanatomy and Neurophysiology for Rehabilitation Physicians"*

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*This course may be the best investment you can make for two reasons: in addition to updating your knowledge in Neuroanatomy and Neurophysiology for Rehabilitation Physicians, you will obtain a course title from TECH”*

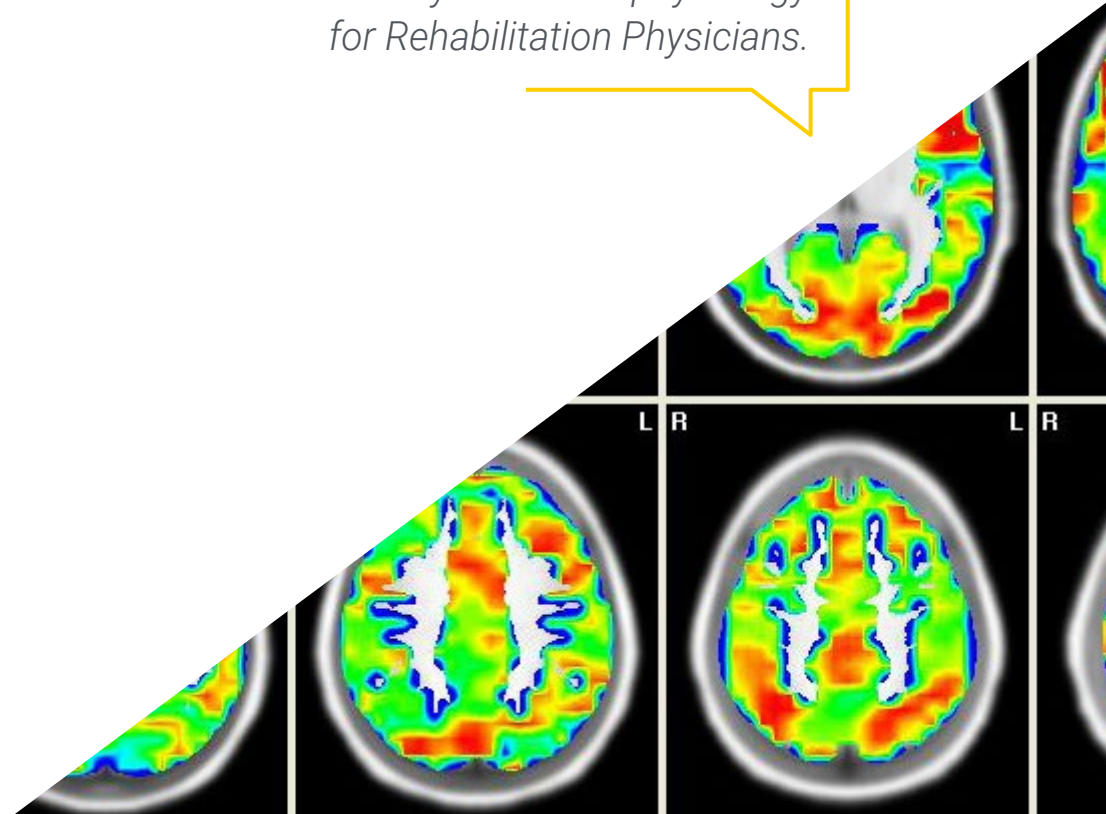
It includes in its teaching staff professionals belonging to the field of Neuroanatomy and Neurophysiology for Rehabilitation Physicians who pour into this program the experience of their work, in addition to recognized specialists belonging to leading societies and prestigious universities

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 training program to train in real situations

Problem-Based Learning underpins this program design, and the students must use it to try and solve the different professional practice situations that arise throughout the course. To do so, the student will be assisted by an innovative interactive video system created by renowned experts in the field of Neuroanatomy and Neurophysiology for Rehabilitation Physicians with extensive teaching experience

*Increase your decision-making confidence by updating your knowledge through this Postgraduate Certificate.*

*Take the opportunity to learn about the latest advances in Neuroanatomy and Neurophysiology for Rehabilitation Physicians.*



# 02 Objectives

The Postgraduate Certificate in Neuroanatomy and Neurophysiology for Rehabilitation Physicians is aimed at facilitating the performance of rehabilitation physicians in their daily practice







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*Our goal is yours: to provide you with the best online update program in this area of the teaching market. A one-of-a-kind course that will propel you to the forefront of your industry"*



## General Objectives

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- Learn to locate the different anatomical structures of the region
- Identify pathologies to ensure correct ultrasound guided physiotherapy treatment
- Define the limits of ultrasound
- Learning the use of ultrasound in the context of the competences of the Rehabilitation Physician



*Update your knowledge through the Neuroanatomy and Neurophysiology for Rehabilitation Physicians program*





## Specific Objectives

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- Describe the structural anatomical bases of the nervous system
- Describe the functional anatomical bases of the nervous system
- Revise the different theories of motor control
- Update knowledge in neuroscience applicable to neurological injuries



03

# Course Management

The program's teaching staff includes leading specialists in neuroanatomy and neurophysiology, who bring the experience of their work to this program. In addition, other specialists of recognized prestige participate in its design and elaboration, completing the program in an interdisciplinary manner





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*Learn from leading professionals, the latest advances in procedures in the field of Neuroanatomy and Neurophysiology for Rehabilitation Physicians”*

## Management



### Ms. De Andrés Garrido, Berta

- ♦ Neurophysiotherapist at the Neurological Rehabilitation Center in Neurointegra
- ♦ Diploma in Physiotherapy
- ♦ Master's Degree in Neurological Physiotherapy of Adults and Children
- ♦ Master's Degree in Neurological Physiotherapy

## Professors

### Mr. Ruiz García, Pablo

- ♦ Physiotherapist in ADACEA Alicante
- ♦ Degree in Physiotherapy
- ♦ Master's Degree in Neurorehabilitation

### Mr. Sarrias Arrabal, Esteban

- ♦ Department of Psychology at the University of Seville

### Dr Rembrandt Rodríguez Sánchez, Augusto

- ♦ Professor en Cardenal Spínola University Center of Studies CEU
- ♦ Degree in Physical Activity and Sports Science
- ♦ PhD from the University of Seville

### Ms. Aguado Caro, Patricia

- ♦ Carries out her work at the Neurological Rehabilitation Center at Neurointegra
- ♦ Neuropsychologist

### Ms. Narbona González, Natividad

- ♦ Carries out her work at the Neurological Rehabilitation Center at Neurointegra
- ♦ Neuropsychologist



04

# Structure and Content

The structure of the contents has been designed by a team of professionals from the best educational centers, universities, and companies in the national territory, aware of the relevance of current specialization in order to intervene in the training and support of students, and committed to quality teaching through New Educational Technologies





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*This Postgraduate Certificate in Neuroanatomy and Neurophysiology for Rehabilitation Physicians contains the most complete and up-to-date scientific program on the market"*

## Module 1. Neuroanatomy and Neurophysiology

- 1.1. Anatomy
  - 1.1.1. Introduction to Structural Anatomy
  - 1.1.2. Introduction to Functional Anatomy
  - 1.1.3. Spinal Cord
  - 1.1.4. Brainstem
  - 1.1.5. Frontal
  - 1.1.6. Parietal
  - 1.1.7. Temporal.
  - 1.1.8. Occipital
  - 1.1.9. Cerebellum.
  - 1.1.10. Basal Ganglia
- 1.2. Physiology
  - 1.2.1. Neuroplasticity.
  - 1.2.2. Muscle Tone
- 1.3. Motor Control
  - 1.3.1. Motor Behavior
  - 1.3.2. Motor Control





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

05

# Methodology

This academic program offers students a different way of learning. Our methodology uses a cyclical learning approach: **Relearning**.

This teaching system is used, for example, in the most prestigious medical schools in the world, and major publications such as the **New England Journal of Medicine** have considered it to be one of the most effective.



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

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*Did you know that this method was developed in 1912, at Harvard, for law students? The case method consisted of presenting students with real-life, complex situations for them to make decisions and justify their decisions on how to solve them. In 1924, Harvard adopted it as a standard teaching method”*

The effectiveness of the method is justified by four fundamental achievements:

1. Students who follow this method not only achieve the assimilation of concepts, but also a development of their mental capacity, through exercises that evaluate real situations and the application of knowledge.
2. Learning is solidly translated into practical skills that allow the student to better integrate into the real world.
3. Ideas and concepts are understood more efficiently, given that the example situations are based on real-life.
4. Students like to feel that the effort they put into their studies is worthwhile. This then translates into a greater interest in learning and more time dedicated to working on the course.



## Relearning Methodology

At TECH we enhance the case method with the best 100% online teaching methodology available: Relearning.

This university is the first in the world to combine the study of clinical cases with a 100% online learning system based on repetition, combining a minimum of 8 different elements in each lesson, a real revolution with respect to the mere study and analysis of cases.

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





At the forefront of world teaching, the Relearning method has managed to improve the overall satisfaction levels of professionals who complete their studies, with respect to the quality indicators of the best online university (Columbia University).

With this methodology, more than 250,000 physicians have been trained with unprecedented success in all clinical specialties regardless of surgical load. Our pedagogical methodology is developed in a highly competitive environment, with a university student body with a strong socioeconomic profile and an average age of 43.5 years old.

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

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

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



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



#### Study Material

All teaching material is produced by the specialists who teach the course, specifically for the course, so that the teaching content is highly specific and precise.

These contents are then applied to the audiovisual format, to create the TECH online working method. All this, with the latest techniques that offer high quality pieces in each and every one of the materials that are made available to the student.



#### Surgical Techniques and Procedures on Video

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



#### Interactive Summaries

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

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



#### Additional Reading

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





#### Expert-Led Case Studies and Case Analysis

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



#### Testing & Retesting

We periodically evaluate and re-evaluate students' knowledge throughout the program, through assessment and self-assessment activities and exercises, so that they can see how they are achieving their goals.



#### Classes

There is scientific evidence on the usefulness of learning by observing experts. The system known as Learning from an Expert strengthens knowledge and memory, and generates confidence in future difficult decisions.



#### Quick Action Guides

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



# 06 Certificate

The Postgraduate Certificate in Neuroanatomy and Neurophysiology for Rehabilitation Physicians guarantees students, in addition to the most rigorous and up-to-date education, access to a Postgraduate Certificate issued by TECH Technological University



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

This **Postgraduate Certificate in Neuroanatomy and Neurophysiology for Rehabilitation Physicians** 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 Technological University** via tracked delivery\*.

The diploma issued by **TECH Technological 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 Neuroanatomy and Neurophysiology for Rehabilitation Physicians**

Official N° of Hours: **100 h.**



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

future

health confidence people

education information tutors

guarantee accreditation teaching

institutions technology learning

community commitment

personalized service innovation

knowledge present

online training

development language

virtual classroom

**tech** technological  
university

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Course Modality: **Online**

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