

# Postgraduate Diploma Neurosurgery: Peripheral Nerve and Vascular Pathology



## Postgraduate Diploma Neurosurgery: Peripheral Nerve and Vascular Pathology

- » Modality: online
- » Duration: 6 months
- » Certificate: TECH Global University
- » Credits: 18 ECTS
- » Schedule: at your own pace
- » Exams: online

Website: [www.techtitute.com/us/medicine/postgraduate-diploma/postgraduate-diploma-neurosurgery-peripheral-nerve-vascular-pathology](http://www.techtitute.com/us/medicine/postgraduate-diploma/postgraduate-diploma-neurosurgery-peripheral-nerve-vascular-pathology)

# Index

01

Introduction

---

*p. 4*

02

Objectives

---

*p. 8*

03

Course Management

---

*p. 12*

04

Structure and Content

---

*p. 16*

05

Methodology

---

*p. 20*

06

Certificate

---

*p. 28*

# 01

# Introduction

This highly scientifically rigorous program will provide you with advanced knowledge in Neurosurgery: Peripheral Nerve and Vascular Pathology. Throughout these months of training you will learn the precise diagnostic indications for a correct initial evaluation; the basic principles of diagnosis and treatment of subarachnoid hemorrhage; as well as how to identify the different types of vascular malformations and their differences in terms of morphology and risk of bleeding, among many other issues of interest to the physician who wants to specialize in neurosurgery.

A unique and innovative training that stands out for the excellent quality of its contents and for having the best teaching staff in this area of study.



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*Do not hesitate to take this training with us. You will find the best teaching material with virtual lessons”*

Neurosurgery focuses on the study and treatment of potentially surgical pathology of the central and peripheral nervous system. In recent years the interaction of Neurosurgery with new technologies has allowed not only a better knowledge of brain pathology but also an optimization of the treatments performed with a decrease in morbidity and mortality and an improvement in the results.

From this perspective, the Postgraduate Diploma in Neurosurgery: Pathology of Peripheral and Vascular Nerves is an updated compilation of pathologies that require study and treatment by Neurosurgery. The application of diagnostic and therapeutic algorithms enhances student learning and synthesizes the flow of information to facilitate its practical application in the student's environment.

On the other hand, the multimedia content developed with the latest interactive educational technology enhances the adoption of problem-solving strategies by students. This way, the student will acquire the necessary skills to approach the diagnosis and treatment of neurosurgical pathologies.

For this reason, this Postgraduate Diploma is the most intensive and effective trained program on the market in this field. A high level of training that will allow you to become one of the most up-to-date professionals in the sector, in a field with a high demand for professionals.

This **Postgraduate Diploma in Neurosurgery: Peripheral Nerve and Vascular Pathology** contains the most complete and up-to-date educational program on the market.

The most important features include:

- ◆ Practical cases presented by experts in Neurosurgery
- ◆ 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.
- ◆ The latest developments in Neurosurgery
- ◆ Practical exercises where the self-assessment process can be carried out to improve learning
- ◆ Special emphasis on innovative methodologies in neurosurgery
- ◆ Theoretical lessons, questions to the expert, debate forums on controversial topics, and individual reflection work.
- ◆ Content that is Accessible from any Fixed or Portable device with an Internet Connection



*Expand your knowledge through this Postgraduate Diploma that will allow you to specialize with a view to achieving excellence in this field"*

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*This Postgraduate Diploma is the best investment you can make when selecting a refresher program for two reasons: in addition to updating your knowledge of Neurosurgery, you will obtain a qualification endorsed by TECH"*

The teaching staff includes professionals from the Neurosurgery sector, who bring their experience to this training program, as well as renowned specialists from leading societies and prestigious universities.

The multimedia content, developed with the latest educational technology, will provide the physician with situated and contextual learning, i.e., a simulated environment that will provide immersive training that is programmed to train students in real situations.

The design of this Program focuses on Problem-Based Learning, by means of which the professional will have to try to solve the different situations of Professional Practice, which will be posed throughout the Program. For this purpose, the pediatric orthopedic physician will be assisted by an innovative interactive video system developed by renowned experts in the field of neurosurgery: Peripheral Nerve and Vascular Pathology and with great experience.

*The current importance of Neurosurgery makes this Postgraduate Diploma an essential training for professionals in the sector.*

*A comprehensive program that will help you keep up to date with the latest techniques in Neurosurgery.*



# 02 Objectives

The program in Neurosurgery: Peripheral Nerve and Vascular Pathology is oriented to facilitate the professional's performance with the latest advances and most innovative treatments in the sector.







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*Thanks to this Postgraduate Diploma you will be able to specialize in Neurosurgery and learn about the latest advances in the field”*



## General Objectives

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- ◆ Acquire more in-depth knowledge of the speciality, with a practical approach to help professionals apply the information learned in their clinical practice, focusing on the latest diagnostic and therapeutic guidelines and the most recent scientific evidence.
- ◆ Learn the latest surgical techniques that have been implemented in recent years along with the knowledge of technological development in multiple areas of Neurosurgery



*Take the opportunity and take the step to get up-to-date on the latest developments in Neurosurgery: Peripheral Nerve and Vascular Pathology"*





## Specific Objectives

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- ◆ Learn the precise diagnostic indications to correctly evaluate and classify patients with TBI from the point of view of emergency care.
- ◆ Describe and understand the usefulness of neuromonitoring systems in patients with severe TBI, and correlate the information they provide with the therapeutic algorithms applied in intensive care units.
- ◆ Acquire in-depth knowledge of the surgical indications in patients with traumatic intracranial lesions, as well as the main prognostic determinants
- ◆ Recognize the uniqueness in the management of two specific situations of patients with TBI, such as patients with anticoagulant therapy and pediatric patients.
- ◆ Learn the concepts of peripheral nerve pathology that may most frequently require neurosurgical evaluation, and the application of new technological advances to its treatment.
- ◆ Specialize in the basic principles of diagnosis and treatment of subarachnoid hemorrhage, both from a neurosurgical perspective and from the perspective of the intensivist
- ◆ Identify the most important complications, their timeline, and basic tools for preventing and treating them.
- ◆ Learn the clinical characteristics of cerebral aneurysms according to their location and size, correlating it with the clinical presentation and prognosis
- ◆ Understand the differential characteristics of certain types of aneurysms according to their etiology
- ◆ Discuss the advantages and disadvantages of surgical and endovascular treatment in the treatment of cerebral aneurysms, and know the main indications of each of the therapeutic alternatives depending on the location and shape of the aneurysm
- ◆ Gain in-depth knowledge of the main multicenter studies whose results and conclusions have determined the management of unruptured cerebral aneurysms, and how they have modified the choice of the type of treatment
- ◆ Learn to identify the different types of vascular malformations and their differences in terms of morphology and bleeding risk, provide the basis for describing the different therapeutic modalities in the management of vascular malformations, understanding the need for a multidisciplinary approach and the possibility of combining different treatments
- ◆ Define the role of neurosurgery in the treatment of both hemorrhagic and ischemic stroke, providing examples that help to understand the indications for surgery and its role in the overall therapeutic management required for this type of patient.

# 04

# Course Management

The program includes in its teaching staff leading experts in Neurosurgery, who bring to this training the experience from their work. Additionally, other recognized experts participate in its design and preparation, completing the program in an interdisciplinary manner.



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*Leading experts in Neurosurgery have joined forces to share all their knowledge in the field with you”*

## Management



### Dr. Fernández Carballal, Carlos

- ♦ Head of the Spinal Pathology Section. Neurosurgery Service
- ♦ Gregorio Marañón General University Hospital
- ♦ Associate Neurosurgery Professor. Faculty of Medicine. Complutense University of Madrid
- ♦ PhD in Surgery from the Autonomous University of Madrid Faculty of Medicine, obtaining the qualification of outstanding cum laude.
- ♦ Member of the Spanish Society of Neurosurgery, Member of the Neurorachis Society, Member of the Spanish Society of Functional Neurosurgery (SENEF)
- ♦ Master's Degree in Medical and Clinical Management from the Spanish Distance University (UNED).
- ♦ Degree in Medicine (University of Navarra, 1999)

## Professors

### Dr. García Leal, Roberto

- ♦ Head of Department. Neurosurgery Department. Gregorio Marañón General University Hospital
- ♦ Master's Degree in Management and Planning of Health Care Centers and Services". Business Excellence School
- ♦ Academic Director of "Grupo CTO", an entity dedicated to Undergraduate and Postgraduate Health Education in Medicine and Nursing
- ♦ Degree in Medicine and Surgery (June the Autonomous University of Madrid in 1996)

### Dr. Mateo Sierra, Olga

- ♦ Neurosurgery Professor. Complutense University of Madrid
- ♦ Neurosurgery Department. Gregorio Marañón General University Hospital
- ♦ Degree in Medicine and Surgery, Autonomous University of Madrid

### Dr. Ruiz Juretschke, Fernando

- ♦ Neurosurgery Professor. Complutense University of Madrid
- ♦ Neurosurgery Department. Gregorio Marañón General University Hospital
- ♦ Degree in Medicine from the Faculty of Medicine at the Complutense University of Madrid.
- ♦ Master's Degree in Neurological Oncology.

**Dr. Iza Vallejo, Begoña**

- ◆ Neurosurgery Department. Gregorio Marañón General University Hospital
- ◆ Degree in Medicine from the Faculty of Medicine at the University of the Basque Country.
- ◆ Master's Degree in Neurological Oncology. CEU Cardenal Herrera University

**Dr. Garbizu Vidorreta, José Manuel**

- ◆ Neurosurgery Department. Gregorio Marañón General University Hospital
- ◆ Degree in Medicine from the Faculty of Medicine at the University of Cantabria.

**Dr. José Vargas López, Antonio**

- ◆ Neurosurgery Department. Torrecárdenas Hospital.
- ◆ Neurosurgery Specialist. Vithas Virgen del Mar de Almería Hospital
- ◆ Degree in Medicine. Complutense University of Madrid

**Dr. González Quarante, Laín Hermes**

- ◆ Neurosurgery Department. Navarra University Clinic
- ◆ Resident tutor in the Neurosurgery Department. Navarra University Clinic
- ◆ Degree in Medicine. University of Barcelona

**Dr. Gil de Sagredo del Corral, Oscar Lucas**

- ◆ Neurosurgery Department. Gregorio Marañón General University Hospital
- ◆ Degree in Medicine and Surgery. Complutense University of Madrid
- ◆ Member of the Spanish Society of Neurosurgery (SENEC)

**Dr. Valera Melé, Marc**

- ◆ Neurosurgery Department. Gregorio Marañón General University Hospital
- ◆ Degree in Medicine from the Hospital Clínic de Barcelona.

**Dr. Casitas Hernando, Vicente**

- ◆ Neurosurgery Department. Gregorio Marañón General University Hospital, Madrid
- ◆ Specialization Diploma in Cerebral, Medullary and Peripheral Nerve Neuromodulation. University of Granada

**Dr. Manuel Poveda, José**

- ◆ Neurosurgery Department. Gregorio Marañón General University Hospital
- ◆ Degree in Medicine. Central University of Venezuela

**Dr. García Hernando, Silvia**

- ◆ Neurosurgery Department. Gregorio Marañón General University Hospital
- ◆ Degree in Medicine. Navarra University, Pamplona

**Dr. Moreno Gutiérrez, Ángela**

- ◆ Neurosurgery Department at the Gregorio Marañón General University Hospital.
- ◆ Degree in Medicine and Surgery from the Autonomous University of Barcelona
- ◆ Member of the Spanish Society of Pediatric Neurosurgery

**Dr. Darriba Alles, Juan Vicente**

- ◆ Attending Physician in the Neurosurgery Department at the Gregorio Marañón General University Hospital (Madrid) since 2012.
- ◆ Specialization in Neurosurgery as Resident Intern at the Central University Hospital of Asturias (Oviedo)
- ◆ PhD candidate UAM since 2018: virtual planning with CAD/CAM technology and intraoperative navigation in the surgical treatment of craniosynostosis.
- ◆ Affiliate member of the Spanish Society of Neurosurgery (SENEC).

# 04

# Structure and Content

The structure of the content has been designed by the best professionals in the Neurosurgery sector, with extensive experience and recognized prestige in the profession, backed by the volume of cases reviewed, studied, and diagnosed, and with extensive knowledge of new technologies applied to teaching.







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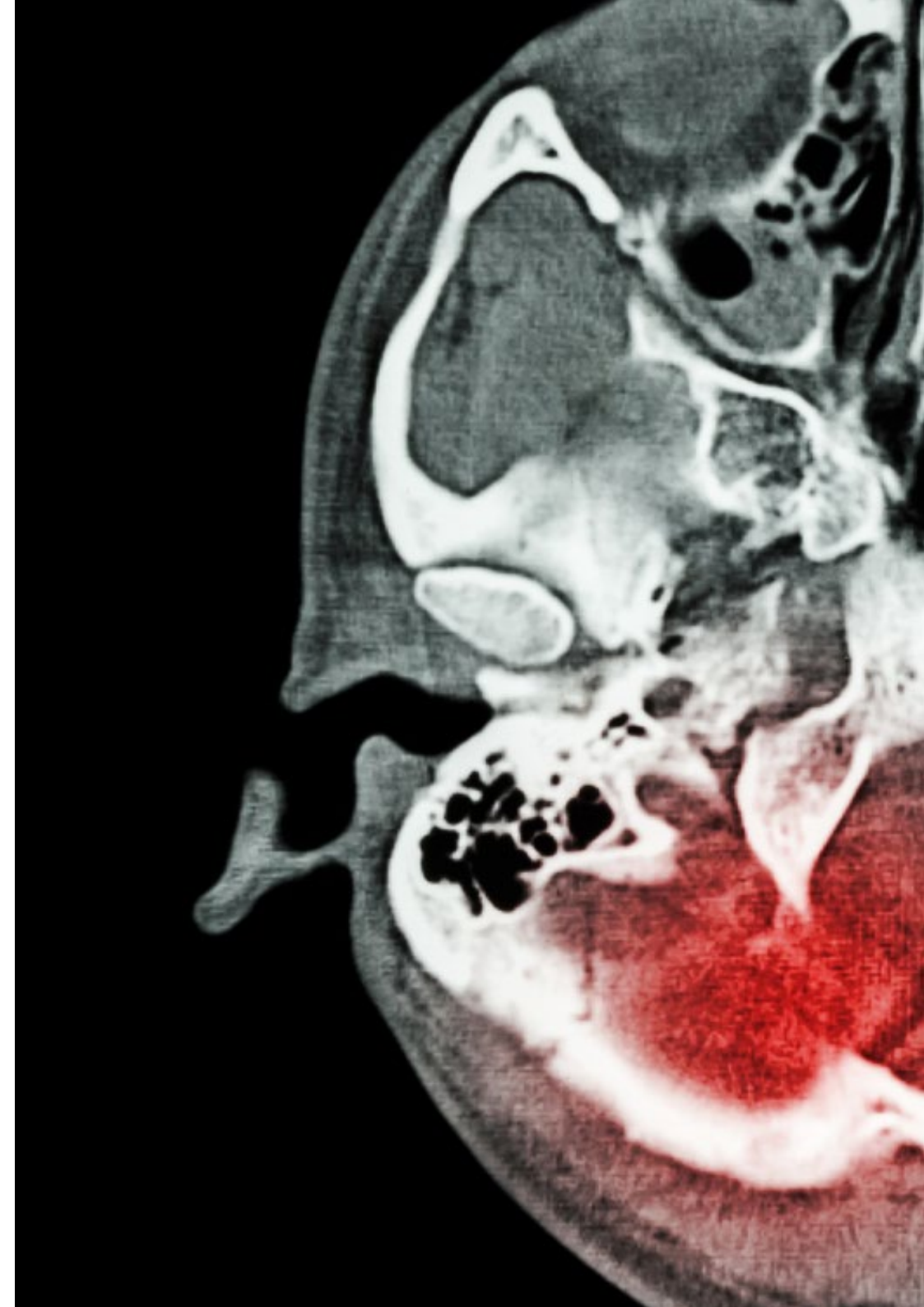
*This Postgraduate Diploma in Neurosurgery: Peripheral Nerve and Vascular Pathology contains the most complete and up-to-date scientific program on the market”*

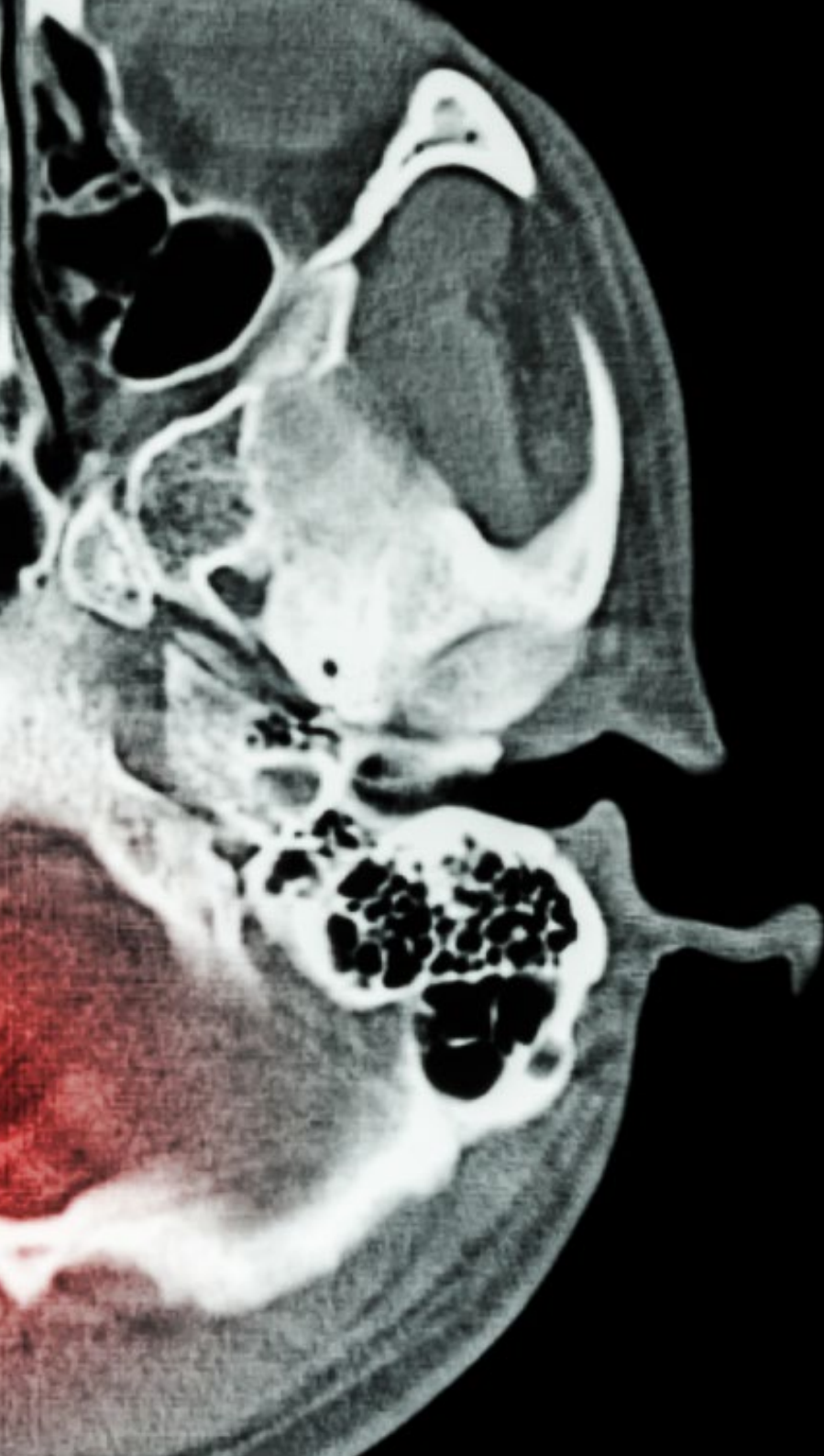
## Module 1. Cranioencephalic Trauma. Peripheral Nerve Pathology

- 1.1. TBI Classification
  - 1.1.1. Mild TBI Evaluation
- 1.2. Neuromonitoring
- 1.3. Treatment of Intracranial Hypertension in Patients with TBI
- 1.4. Indications for Surgery in Cerebral Contusions and Post-Traumatic Cerebral Edema
- 1.5. Acute Epidural Hematoma
  - 1.5.1. Cranial Fractures
- 1.6. Post-Traumatic Subdural Hemorrhage
  - 1.6.1. Acute Subdural Hematoma
  - 1.6.2. Chronic Subdural Hematoma
- 1.7. TBI in Anticoagulated Patients
- 1.8. Cranioencephalic Trauma in Children
- 1.9. Peripheral Nerve Pathology Brachial Plexus Injuries
- 1.10. Peripheral Nerve Pathology Peripheral Nerve Entrapment Syndromes

## Module 2. Vascular Pathology I. Subarachnoid Hemorrhage and Intracranial Aneurysmal Pathology

- 2.1. Subarachnoid Hemorrhage: Clinical, Diagnostic, and Neurological Prognosis
- 2.2. Subarachnoid Hemorrhage Complications
- 2.3. Treating and Managing Patients with Subarachnoid Hemorrhage
- 2.4. NonAneurysmal Subarachnoid Hemorrhage
- 2.5. Anterior Circulation Aneurysms
- 2.6. Posterior Circulation Aneurysms
- 2.7. Natural History and Treatment of Unruptured Brain Aneurysm
- 2.8. Surgical Treatment of Intracranial Aneurysms
- 2.9. Endovascular Treatment of Intracranial Aneurysms
- 2.10. Mycotic and Traumatic Aneurysms





### Module 3. Vascular Pathology II. Vascular Malformations and Neurosurgical Treatment of Stroke

- 3.1. Arteriovenous Malformations: Clinical Features, Natural History, and Classification
- 3.2. Therapeutic Approaches in the Treatment of Arteriovenous Malformations
  - 3.2.1. Surgery
  - 3.2.2. Radiosurgery
  - 3.2.3. Endovascular Treatment
- 3.3. Cavernomatous Malformations
- 3.4. Venous Angiomas and Telangiectasias
- 3.5. Classification and Management of Intracranial Dural Arteriovenous Fistulas
- 3.6. Spinal Dural Fistulas Classifications and Treatment
- 3.7. Carotid- Cavernous Fistulas
  - 3.7.1. Treatment Options in Carotid-Cavernous Fistulas
- 3.8. Surgical Indication for Hemorrhagic
- 3.9. Current Status of Neurosurgical Treatment in Ischemic Stroke
  - 3.9.1. Indications for Decompressive Craniectomy in Ischemic Stroke



*This will provide key training to advance your career"*

05

# Methodology

This training program provides you with a different way of learning. Our methodology uses a cyclical learning approach: ***Re-learning***.

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 Re-learning, 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 abundant 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. Gervas, 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.



## Re-Learning Methodology

At TECH we enhance the Harvard case method with the best 100% online teaching methodology available: Re-learning.

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 Re-learning method has managed to improve the overall satisfaction levels of professionals who complete their studies, with respect to the quality indicators of the best Spanish-speaking 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 high socioeconomic profile and an average age of 43.5 years old.

*Re-learning 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 multimedia content presentation training Exclusive system 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 & Re-testing

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 your goals.



#### Classes

There is scientific evidence on the usefulness of learning by observing experts: The system termed Learning from an Expert strengthens knowledge and recall capacity, and generates confidence in the face of difficult decisions in the future.



#### 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

This Postgraduate **Diploma in Neurosurgery: Peripheral Nerve and Vascular Pathology** guarantees, in addition to the most rigorous and up-to-date training, access to a Postgraduate Diploma qualification issued by **TECH Global University**.



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*Successfully complete this training program and receive your university certificate without travel or laborious paperwork"*

This program will allow you to obtain your **Postgraduate Diploma in Neurosurgery: Peripheral Nerve and Vascular Pathology** 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.

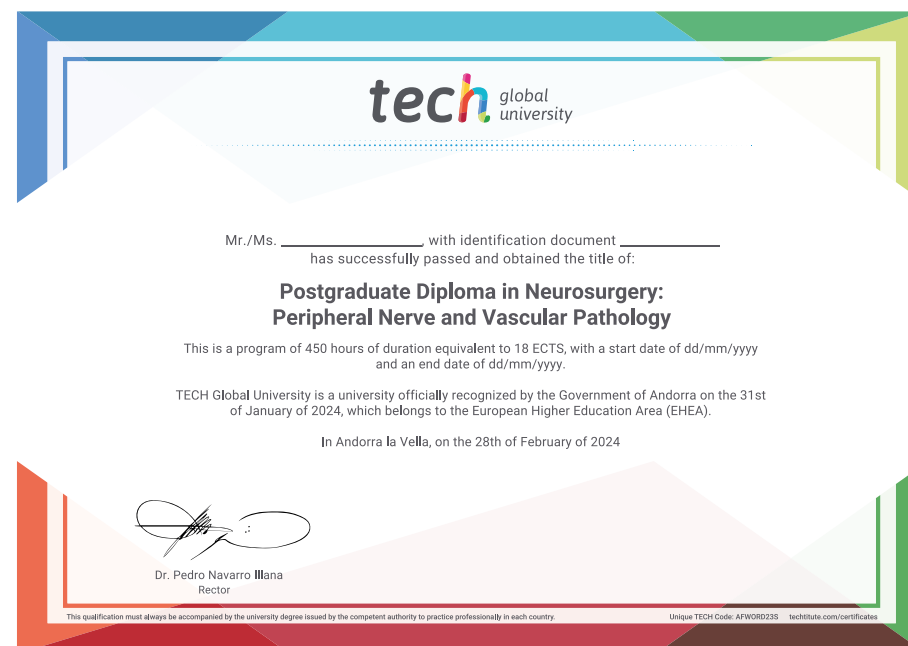
This **TECH Global University** title is a European program of continuing education and professional updating that guarantees the acquisition of competencies in its area of knowledge, providing a high curricular value to the student who completes the program.

Title: **Postgraduate Diploma in Neurosurgery: Peripheral Nerve and Vascular Pathology**

Modality: **online**

Duration: **6 months**

Accreditation: **18 ECTS**



\*Apostille Convention. In the event that the student wishes to have their paper diploma issued with an apostille, TECH Global University 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



**Postgraduate Diploma**  
Neurosurgery:  
Peripheral Nerve  
and Vascular Pathology

- » Modality: **online**
- » Duration: **6 months**
- » Certificate: **TECH Global University**
- » Credits: **18 ECTS**
- » Schedule: **at your own pace**
- » Exams: **online**

# Postgraduate Diploma

## Neurosurgery: Peripheral Nerve and Vascular Pathology