



# Postgraduate Certificate

Cranioencephalic Trauma.Peripheral Nerve Pathology

Course Modality: Online

Duration: 6 weeks

Certificate: TECH Technological University

**6 ECTS Credits** 

Teaching Hours: 150 hours.

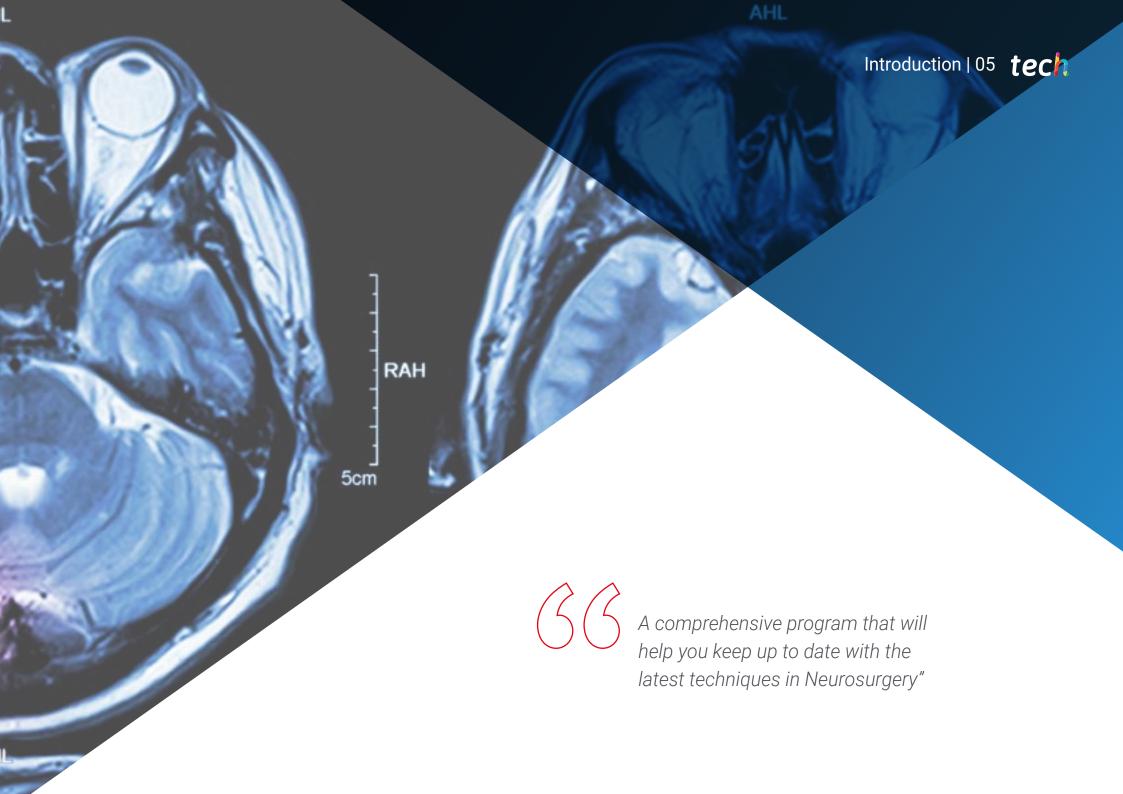
Website: www.techtitute.com/medicine/postgraduate-certificate/craniocephalic-trauma-peripheral-nerve-pathology

# Index

> 06 Certificate

> > p. 28





# tech 06 | Introduction

The Postgraduate Certificate in Cranioencephalic Trauma. Pathology of Peripheral Nerves is an updated compilation of pathologies that require study and treatment with 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.

The first topic deals with the classification of TBI and the evaluation of mild TBI, with emphasis on the diagnostic algorithms that determine the indication for radiological tests and the initial evaluation of TBI, which is mainly performed in hospital emergency departments. Interaction with intensive care specialties is essential for the correct treatment of patients with TBI; the topics of neuromonitoring and treatment of intracranial hypertension explain the most innovative techniques in the neurological monitoring of patients with TBI (also applicable to other critical neurological and neurosurgical patients), as well as the different treatments that are staggered in the therapeutic management following the latest updated reviews.

More specifically neurosurgical, the topics related to the indications for surgery in brain contusions and post-traumatic brain edema, acute epidural hematoma and cranial fractures, and acute and chronic subdural hematoma, are focused highlighting the criteria for surgical indication and prognosis according to the most recent medical literature. The high incidence of anticoagulation, especially in elderly patients, the emergence of new anticoagulant treatments and the limited scientific evidence available justify addressing it in a specific topic on TBI in anticoagulated patients, with the aim of establishing precise indications for action in this group of patients who often pose diagnostic and therapeutic dilemmas.

Finally, due to the singularities it presents, especially in relation to the high incidence in pediatric emergency services and the specificity of some entities specific to children, TBI in pediatric patients is addressed in a specific topic.

The Postgraduate Certificate in Cranioencephalic Trauma. Peripheral Nerve 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 Certificate that will allow
you to specialize with a view to achieving
excellence in this field"



This Postgraduate Certificate's is the best investment you can make when choosing a refresher programme to expand your existing knowledge in Cranioencephalic Trauma" Peripheral Nerve Pathology"

The second part of the program deals with peripheral nerve pathology, and the first topic of brachial plexus injuries is directly related to the previously discussed traumatic pathology as they share etiological cause and frequently occur together. To complement the study of peripheral nerve pathology and although it is an entity that can be approached from other specialties such as Plastic Surgery or Orthopedic Surgery, the topic of peripheral nerve entrapment syndromes presents the main novelties in the treatment of this highly prevalent pathology, which can benefit from innovations applied in other branches of Neurosurgery.

For this reason, this Postgraduate Certificate is the most intensive and effective educational 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

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

This Postgraduate Certificate 100% online course will allow you to combine your studies with your professional work while increasing your knowledge in this field.







# tech 10 | Objectives



# **General Objectives**

- 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



Train yourself for success with the help of this Postgraduate Certificate with which you will learn to develop yourself in the field of Cranioencephalic Trauma. Peripheral Nerve Pathology"





# Objectives | 11 tech



# **Specific Objectives**

- 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.





# tech 14 | Course Management

### 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 (SENFE)
- Master's Degree in Medical and Clinical Management from the Spanish Distance University (UNED).
- Degree in Medicine (University of Navarra, 1999)

### **Professors**

### Mrs. García Hernando, Silvia

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

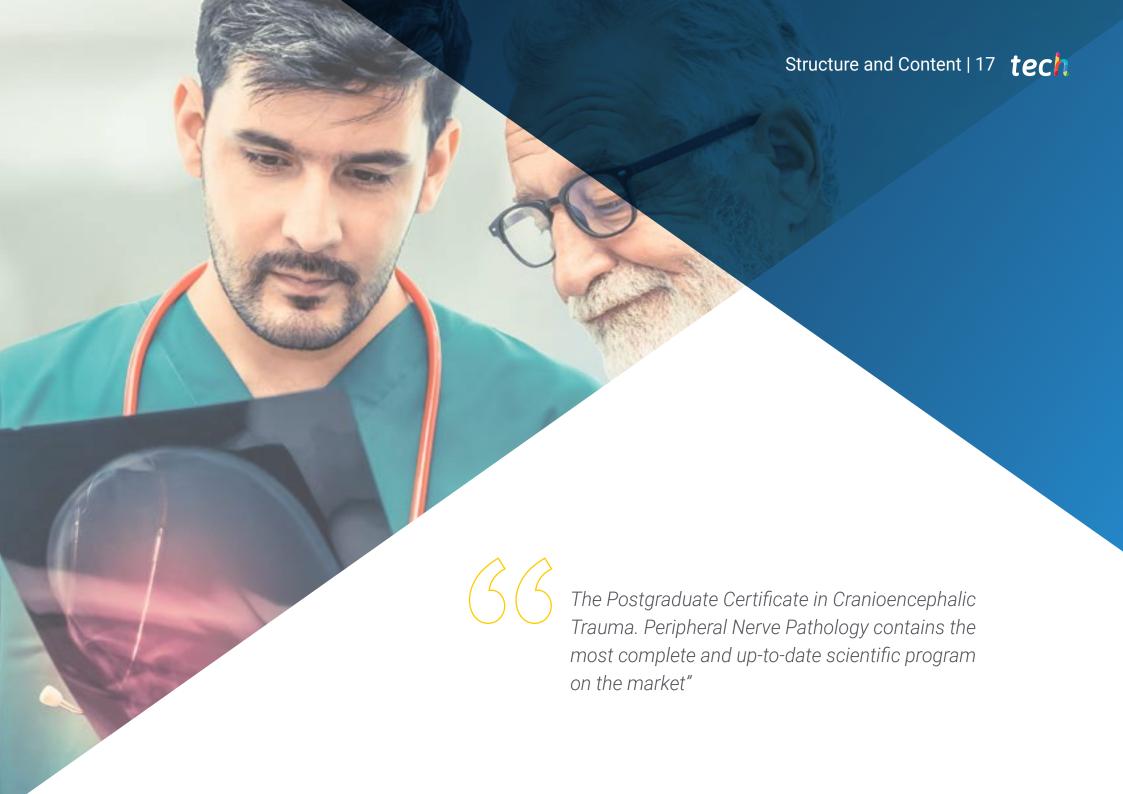
### Dr. Vargas López, José Antonio

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



# **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.



# tech 18 | Structure and Content

### 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

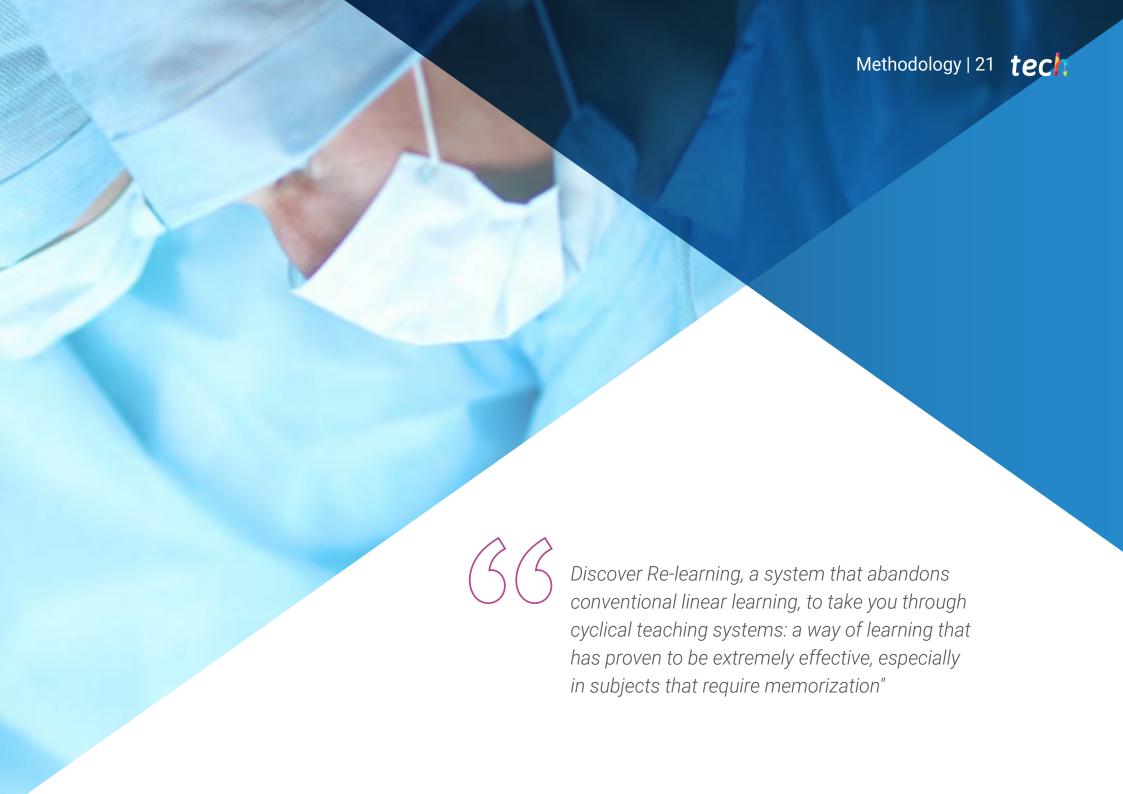






A unique, key, and decisive training experience to boost your professional development"





# 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 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. 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 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.





## Methodology | 25 tech

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.

# tech 26 | Methodology

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**

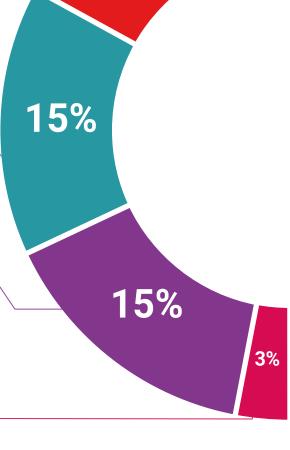
TECH introduces students to the latest techniques, the latest educational advances and to the forefront of current medical techniques. All of this in direct contact with students and explained in detail so as to aid their assimilation and understanding. And best of all, you can watch the videos as many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



17% 7%





# tech 30 | Certificate

The Postgraduate Certificate in Cranioencephalic Trauma. Peripheral Nerve Pathology contains the most complete and up-to-date scientific program on the market.

After passing the evaluation, the student will receive by mail \* with acknowledgment of receipt the corresponding title Postgraduate Certificate issued by **TECH Technological University**.

This diploma contributes to the academic development of the professional and adds a high university curricular value to their training. It is 100% valid in all competitive examinations, labour exchanges and professional career evaluation committees.

Title: Postgraduate Certificate in Cranioencephalic Trauma. Peripheral Nerve Pathology

ECTS: 6

Official No of Hours: 150 hours.



<sup>\*</sup>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.



# Postgraduate Certificate

Cranioencephalic Trauma. Peripheral Nerve Pathology

Course Modality: Online

Duration: 6 weeks

Certificate: TECH Technological University

**6 ECTS Credits** 

Teaching Hours: 150 hours.

