# Postgraduate Diploma

## Evoked Potentials, Intraoperative Monitoring and Neurophysiological Techniques for Therapeutic Purposes

tech technological university

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## Evoked Potentials, Intraoperative Monitoring and Neurophysiological Techniques for Therapeutic Purposes

- Modality: **online**
- Duration: **6 months**
- Certificate: **TECH Technological University**
- Dedication: **16h/week**
- Schedule: **at your own pace**
- Exams: **online**

Website: www.techtitute.com/pk/medicine/postgraduate-diploma/postgraduate-diploma-evoked-potentials-intraoperative-monitoring-neurophysicological-techniques-therapeutic-purposes

# Index

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# Introduction

Neurophysiology, due to the sensitivity of issues related to the brain and nervous system, requires special monitoring during all treatments and diagnostics. In addition, the medical professional who complements this knowledge with advanced neurophysiological techniques for therapeutic purposes will have a much greater professional projection, since it is a unique and highly demanded set of skills in the most prestigious clinics and hospitals. For this reason, TECH has combined in this program these two complete branches of knowledge, supported by professionals with extensive experience in neurophysiological treatments of all kinds, which will boost the graduate's career in a notorious way.


*Learn how to treat chronic pain such as fibromyalgia, herniated disc or sciatica and become a highly sought after and renowned practitioner"*

Many chronic ailments afflict today's patients. Many of them are related to neurophysiological pathologies, so an approach from this field of knowledge is necessary to treat issues such as epilepsy, OSA or Parkinson's disease, among many others that hinder people's lives.

In addition, intraoperative neurophysiological monitoring has become so important in recent decades that it has even become a legal requirement for many procedures. This is because postoperative diagnostics, as well as the surgical procedures themselves, are greatly benefited by using this technique.

Given the importance of these two fields, it is an interesting avenue for professional growth for all physicians who aspire to increase the level of their careers. Thanks to this TECH Postgraduate Diploma, the graduate will have a more complete understanding of therapeutic neurophysiology, its applications in common pathologies in patients and how to use it to monitor surgeries of varying complexity.

This will allow the student not only to access a higher level of knowledge, but even a higher level in his or her professional field. The student even has the convenience of being able to study this course completely online, without the need to attend physical classes or adhere to specific schedules, being able to combine it with daily activities and work.

This **Postgraduate Diploma in Evoked Potentials, Intraoperative Monitoring and Neurophysiological Techniques for Therapeutic Purposes** contains the most complete and up to date scientific program on the market. The most important features include:

- The development of case studies presented by physicians with expertise in neurophysiology for therapeutic purposes
- 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
- Practical exercises where self-assessment can be used to improve learning
- Its 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

*You will be prepared to make a quality leap in the medical field by adding this Postgraduate Diploma in Evoked Potentials, Intraoperative Monitoring and Neurophysiological Techniques for Therapeutic Purposes to your curriculum”*

*Forget old-fashioned programs that require your total devotion and join TECH's educational future where you are the one who sets the pace of study"*

*You will become a more prestigious doctor thanks to the new neurophysiological techniques that you will apply to your patients with more severe pain.*

*Lay the foundation for a medical future that is more relevant to you by enrolling in this Postgraduate Diploma today.*

The program's teaching staff includes professionals from the sector who contribute their work 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 professional with situated and contextual learning, i.e., a simulated environment that will provide immersive training programmed to train in real situations.

This program is designed around Problem Based Learning, whereby the professional must try to solve 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.

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# Objectives

A professional and salary increase is the goal of students who decide to undertake this Postgraduate Diploma. TECH is aware of this, so all efforts are focused on offering students a guaranteed education, which allows them to access the job improvements they seek in the shortest possible time. Thanks to the improvement of professional and transversal competencies that the students will receive, they will have a quality guarantee to access better positions within the medical field.

*This program will prepare you professionally and personally in the healthcare field that can assure you the best future"*

## General Objectives

- Obtain a global and updated vision of Neurophysiologic diagnosis in its different training areas, allowing the student to acquire useful and updated knowledge, homogenize criteria following national and international standards
- Generate in students the desire to broaden their knowledge and apply what they have learned to daily practice, to the development of new diagnostic indications and to research

*TECH will exceed even your best expectations when you access this Postgraduate Diploma and see for yourself the quality of teachers and syllabus"*



## Specific Objectives

### Module 1. Evoked Potentials

- Deepen their knowledge of the basis for obtaining the different evoked potentials
- Decide on the most appropriate techniques for the diagnosis of different pathologies
- Be able to interpret the results of the same
- International guidelines for the performance of evoked potentials are available
- Deepen the understanding of the most common programs for the design of appropriate paradigms for the acquisition of cognitive evoked potentials
- We delve into the peculiarities and differences in the use of evoked potentials in the pediatric age group and in the critical patient setting

### Module 2. Intraoperative Neurophysiological Monitoring

- We will deepen in the concepts of intraoperative neurophysiological techniques
- Theoretical and practical knowledge in the interpretation of neurophysiological signals applied to the surgical field and the anesthetized patient
- Importance of alarm values and their correlation with postoperative clinical changes
- Update on guidelines and protocols
- Acquire the ability to plan, perform and evaluate multimodal neurophysiological techniques applied to the different fields of the surgical field

**Module 3. Neurophysiological Techniques for Therapeutic Purposes. Invasive and Non-invasive Neuromodulation. Botulinum Toxin**

- Deepen in detail the physiological basis of the different techniques of invasive and non-invasive brain stimulation
- Deepen understanding of the most commonly used indications of the different invasive and non-invasive brain stimulation techniques
- Acquire the neurophysiological basis of direct cortical stimulation and its specific indications in the treatment of drug-resistant chronic pain
- Learn the application protocols of direct cortical stimulation in the treatment of drug-resistant chronic pain
- Acquire the neurophysiological basis of spinal cord stimulation and its specific indications in the treatment of chronic pain and other applications
- Learn the application protocols of spinal cord stimulation in the treatment of chronic pain
- Know the role of neuromodulation in the field of epilepsy, as well as its diagnostic applications
- Acquire the neurophysiological basis of brain stimulation in the diagnosis of epilepsy
- Acquire the neurophysiological basis of brain stimulation in the treatment of epilepsy
- Know the diagnostic indications of brain stimulation in epilepsy
- Know the therapeutic indications of brain stimulation in epilepsy
- Understanding the role of deep brain stimulation (DBS) in Parkinson's disease (PD) and other movement disorders
- Learn the physiological basis of deep brain stimulation (DBS)
- Learn the technique and clinical indications of DBS in Parkinson's disease and other movement disorders
- Know the basis and physiological effects of vagus nerve stimulation
- Learn the technique and clinical indications of vagus nerve stimulation
- Knowing the effect of vagus nerve stimulation in patients diagnosed with epilepsy
- Know the physiological basis and effects of hypoglossal nerve stimulation
- Learn the technique and clinical indications of hypoglossal nerve stimulation
- Knowing the effect of hypoglossal nerve stimulation in patients diagnosed with OSAHS
- Know the basis and physiological effects of stimulation of other peripheral nerves such as the trigeminal, occipital, tibial and sacral nerves
- Learn the techniques and clinical indications of trigeminal, occipital, tibial and sacral nerve stimulation
- Understand the fundamentals and basics of how hearing implants work
- Know the types of hearing implants: cochlear and brainstem
- Learn the indications for hearing implant implantation



- Know the physiological basis of non-invasive brain stimulation
- Learn the types of non-invasive brain stimulation: direct transcranial electrical stimulation (TES) and transcranial magnetic stimulation (TMS)
- Learn the indications for non-invasive brain stimulation
- Know the scientific evidence supporting non-invasive brain stimulation and learn the most applied therapeutic protocols
- Know the fundamentals, the basis of operation and the modalities of transcutaneous electrical nerve stimulation (TENS)
- Learn the indications, contraindications and effects of TENS
- Know the mechanism of action of botulinum toxin
- Learn the therapeutic and adverse effects of botulinum toxin
- Learn the technique of botulinum toxin application with guidance by neurophysiological techniques in different dystonia such as cervical dystonia, blepharospasm, facial myokymias, oromandibular dystonia, upper extremity dystonia and trunk dystonia
- Acquire theoretical knowledge (definitions, indications and implementation protocols), as well as training for the practical implementation of personalized neuromodulation therapies according to the indication of the clinical case and following clinical protocols
- Understand neuromodulation therapies as an adjuvant treatment that is part of a multidisciplinary whole, and not as a treatment in exclusivity

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# Course Management

TECH trusts only the best professionals in the field of medicine to write the theoretical content of this degree, so the student is guaranteed to receive the highest level of education in the field of neurophysiology. As a result, the student's résumé will receive an exceptional quality boost when applying for higher-ranking or more prestigious medical positions.

*The best neurophysiological physicians choose TECH for their development. Why? Find out for yourself by enrolling today in this Postgraduate Diploma"*

## Management

### Dr. Martínez Pérez, Francisco

- Clinical Neurophysiology Service. Puerto de Hierro University Hospital, Majadahonda
- Advanced Neurophysiologic studies at Clínica MIP Health-Integrated 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 from 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

## Professors

### Dr. Fernández Sánchez, Victoria

- Head of Section-Clinical Neurophysiology Service at the Regional University Hospital of Malaga
- Honorary collaborator, Department of Human Anatomy, Faculty of Medicine, University of Málaga
- Doctor of Medicine from the University of Malaga
- Degree in Medicine and Surgery from the University of Malaga
- Specialty in Clinical Neurophysiology
- Master's Degree in Sleep by the Pablo Olavide University
- Master's Degree in Neurosciences from Pablo Olavide University

### Dr. Sanz Barbero, Elisa

- Assistant Doctor in Clinical Neurophysiology at the General University Hospital of Getafe
- Head of Intraoperative Monitoring at the University General Hospital of Getafe
- M.I.R., Clinical Neurophysiology, Gregorio Marañó HGU
- Degree in Medicine and Surgery from the University of Salamanca
- Doctorate Courses Neuroscience by the UCM

### Dr. Lladó Carbó, Estela

- Head of Service of the Neurophysiology Unit of HM Hospitals Catalunya
- Specialist, via MIR, in Clinical Neurophysiology at the Hospital Universitari Vall d'Hebrón
- Founder and Medical Director of Neurotoc
- Degree in Medicine and Surgery from the University of Barcelona
- Doctorate in Neurosciences (DEA) from the University of Barcelona
- V Course on Magnetic Stimulation and Neuromodulation by the University of Cordoba - Harvard Berenseon Allen Center

*The leading professionals in the field have come together to offer you the most comprehensive knowledge in this field, so that you can develop with total guarantees of success"*

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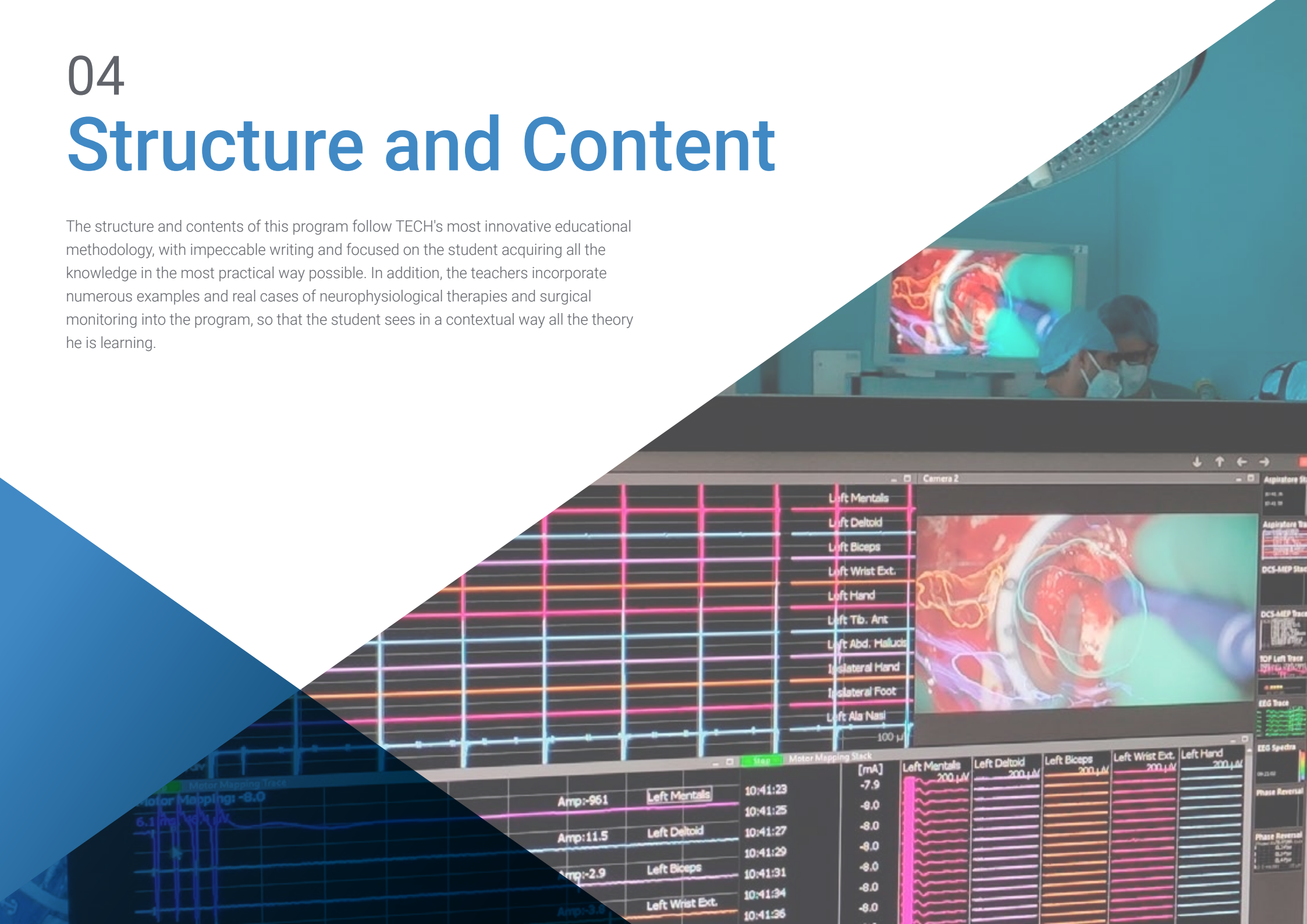
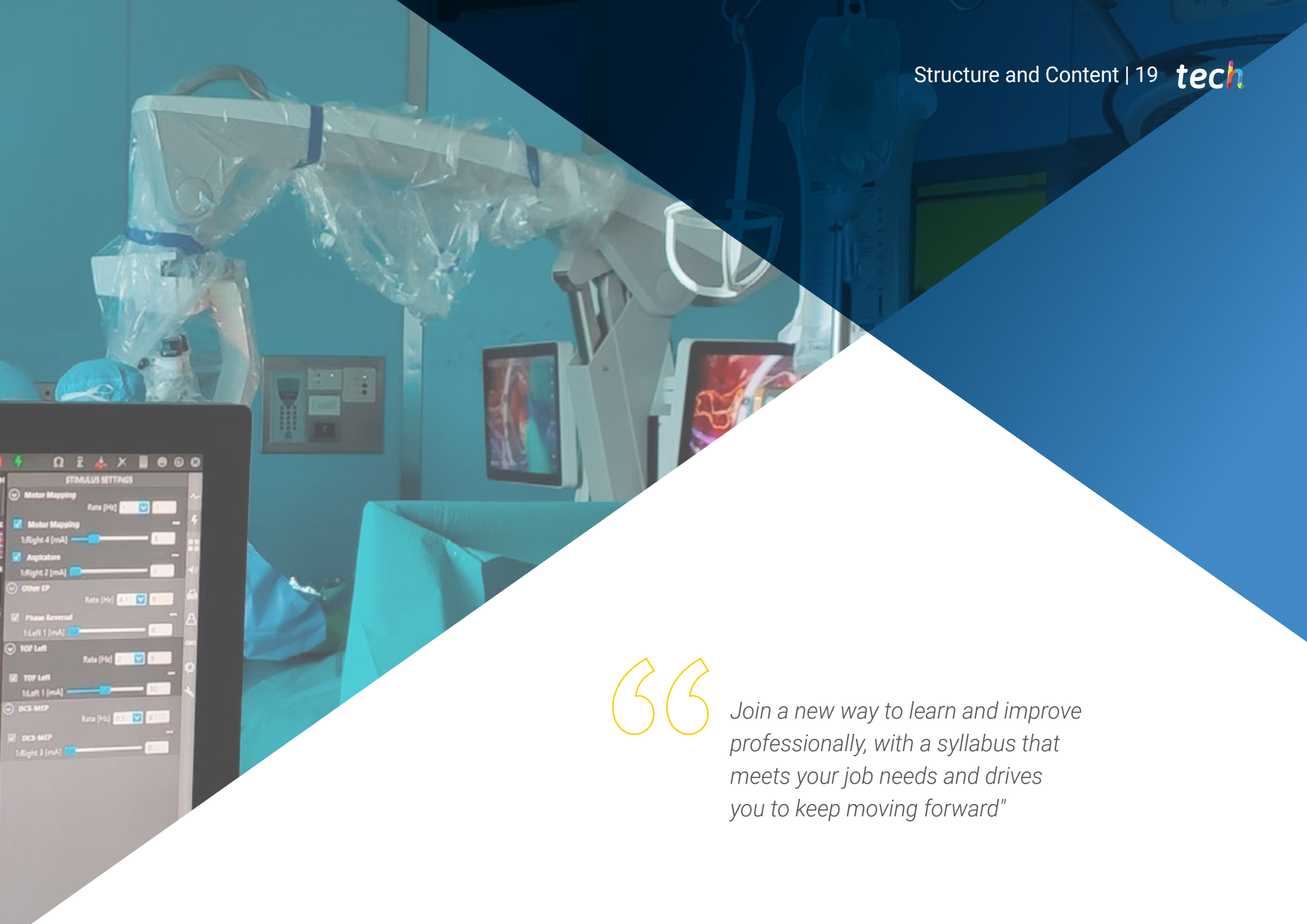
# Structure and Content

The structure and contents of this program follow TECH's most innovative educational methodology, with impeccable writing and focused on the student acquiring all the knowledge in the most practical way possible. In addition, the teachers incorporate numerous examples and real cases of neurophysiological therapies and surgical monitoring into the program, so that the student sees in a contextual way all the theory he is learning.






*Join a new way to learn and improve professionally, with a syllabus that meets your job needs and drives you to keep moving forward"*

## **Module 1.** Evoked potentials

1.1. Fundamentals of Evoked Potentials
- 1.1.1. Fundamental Concepts
- 1.1.2. Types of Evoked Potentials
- 1.1.3. Techniques and Requirements for its Execution
- 1.1.4. Clinical Applications

1.2. Neurophysiological Study of the Ocular and Visual Pathway (I)
- 1.2.1. Electroretinogram
  - 1.2.1.1. ERG Fash
  - 1.2.1.2. ERG with Checkerboard Pattern
  - 1.2.1.3. ERG Ganzfeld
  - 1.2.1.4. Multifocal ERG
- 1.2.2. Electrooculogram

1.3. Neurophysiological Study of the Ocular and Visual Pathway (II)
- 1.3.1. Visual Evoked Potentials
  - 1.3.1.1. Stimulation by Pattern
    - 1.3.1.1.1. Complete Field Study
    - 1.3.1.1.2. Hemifield Studies. Quadrants
  - 1.3.1.2. Stimulation with LED-glasses
  - 1.3.1.3. Other Techniques: Multifocal PEV

1.4. Auditory Pathway
- 1.4.1. Anatomophysiology of the Auditory Pathways
- 1.4.2. Brain Stem Evoked Potentials
  - 1.4.2.1. Short Latency
  - 1.4.2.2. Average Latency
  - 1.4.2.3. Long Latency



1.4.3. Other Techniques
1.4.3.1. Otoacoustic Emissions
1.4.3.1.1. Transient Evoked
1.4.3.1.2. Distortion Products
1.4.3.2. Electrocochleography
1.4.3.3. Steady-state Auditory Evoked Potentials
1.4.3.3.1. PEAee
1.4.3.3.2. PEAee-MF
1.4.3.4. Audiometry
1.4.3.4.1. Pure Tone Audiometry: Liminal Tone Audiometry
1.4.3.4.2. Bone Conduction Audiometry

1.5. Vestibular System
1.5.1. Vestibular System and its Association with the Visual and Proprioceptive System
1.5.2. Nystagmus
1.5.2.1. Vestibular Tests
1.5.2.1.1. Videonystagmography (VNG)
1.5.2.1.1.1. Oculomotor System Tests
1.5.2.1.1.2. Postural and Positional Tests
1.5.2.1.1.3. Caloric Testing
1.5.2.1.1.4. Additional VNG Testing
1.5.3. Peripheral and Central Vertigo
1.5.3.1. Diagnostic Tests
1.5.3.1.1. Electronystagmography
1.5.3.1.2. vHIT
1.5.3.1.3. Posturography
1.5.3.1.4. Vestibular Myogenic Evoked Myogenic Potentials
1.5.3.2. HINTS Protocol
1.5.3.3. Benign Paroxysmal Positional Vertigo (BPPV)

1.6. Somatosensory Potentials
- 1.6.1. Anatomophysiological Recall
- 1.6.2. Technique: Practical Procedures
- 1.6.3. Interpretation
- 1.6.4. Clinical Applications
- 1.6.5. Dermatomal Somatosensory Evoked Potentials

1.7. Motor Evoked Potentials
- 1.7.1. Electrical Stimulation
- 1.7.2. Transcranial Magnetic Stimulation
- 1.7.3. Diagnostic Applications

1.8. Evoked Potentials in Intensive Care Units (ICU)
- 1.8.1. Olfactory Evoked Potentials
- 1.8.2. Evoked Potentials of the Heartbeat
- 1.8.3. Others

1.9. Cognitive Potentials
- 1.9.1. Anatomophysiological Recall
- 1.9.2. Differences with Other Types of Potentials
- 1.9.3. Potential for Clinical Use
- 1.9.4. Clinical and Research Applications

1.10. Evoked Potentials in the Pediatric Age

## **Module 2.** Intraoperative Neurophysiological Monitoring

2.1. Neurophysiological Techniques applied to MIO. Monitoring and Mapping
- 2.1.1. Monitoring Techniques
  - 2.1.1.1. Motor Evoked Potentials
    - 2.1.1.1.1. Transcranial
      - 2.1.1.1.1.1. Muscle Registration
      - 2.1.1.1.1.2. Epidural Recording: D-wave
    - 2.1.1.1.2. Direct Cortical Stimulation
  - 2.1.1.2. Somatosensory Evoked Potentials
  - 2.1.1.3. Auditory Evoked Potential Brain Stem Evoked Potentials
  - 2.1.1.4. Reflexes
  - 2.1.1.5. Peripheral Nerve, Plexus and Nerve Roots. Electromyography
- 2.1.2. Mapping Techniques
  - 2.1.2.1. Phase Opposition *(Phase Reversal)*
    - 2.1.2.1.1. Cortex / Central Sulcus
    - 2.1.2.1.2. Medullary / Posterior Cords
  - 2.1.2.2. Cortical
  - 2.1.2.3. Subcortical
  - 2.1.2.4. Nerve, Plexus and Nerve Roots. EMG

2.2. Electrodes. Influence of Anesthetics. Filters and Artifacts
- 2.2.1. Types of Stimulation and Recording Electrodes. Characteristics and Indications
- 2.2.2. Anesthesia and Monitoring
- 2.2.3. Filters
- 2.2.4. Artefacts
- 2.2.5. Risks. Contraindications

2.3. Intraoperative Neurophysiological Monitoring in Supratentorial Process Surgery
- 2.3.1. Indications for Monitoring and Mapping
- 2.3.2. Techniques to be Used
- 2.3.3. Alarm Criteria

2.4. Intraoperative Neurophysiological Monitoring in Surgery of Infraentorial Processes
- 2.4.1. Indications for Monitoring and Mapping
- 2.4.2. Techniques to be Used
- 2.4.3. Alarm Criteria

2.5. Intraoperative Functional Speech Exploration during Brain Lesionectomies

2.6. Intraoperative Neurophysiological Monitoring in Spinal Cord Surgery
- 2.6.1. Indications for Monitoring and Mapping
- 2.6.2. Techniques to be Used
- 2.6.3. Alarm Criteria

2.7. Intraoperative Neurophysiological Monitoring in Cervical and Dorsal Spine Surgery
- 2.7.1. Indications for Monitoring and Mapping
- 2.7.2. Techniques to be Used
- 2.7.3. Alarm Criteria

2.8. Intraoperative Neurophysiological Monitoring in Lumbar and Sacral Spine Surgery
- 2.8.1. Indications for Monitoring and Mapping
- 2.8.2. Techniques to be Used
- 2.8.3. Alarm Criteria

2.9. Intraoperative Neurophysiological Monitoring in Peripheral Nerve and Plexus Surgery
- 2.9.1. Indications for Monitoring and Mapping
- 2.9.2. Techniques to be Used
- 2.9.3. Alarm Criteria

2.10. Intraoperative Neurophysiological Monitoring in Vascular Surgery
- 2.10.1. Indications for Monitoring and Mapping
- 2.10.2. Techniques to be Used
- 2.10.3. Alarm Criteria

## **Module 3.** Neurophysiological Techniques for Therapeutic Purposes. Invasive and Non-invasive Neuromodulation. Botulinum Toxin

3.1. Invasive Brain Stimulation: Physiological Basis
- 3.1.1. Definition and Physiological Basis of Invasive Brain Stimulation (ICS)
- 3.1.2. Main Indications at the Present Time

3.2. Direct Cortical and Medullary Stimulation
- 3.2.1. Neurophysiological Bases of Direct Cortical Stimulation in the Treatment of Pain. Indications and Practical Examples
- 3.2.2. Neurophysiological Bases of Spinal Cord Electrical Stimulation in the Treatment of Pain. Indications and Practical Examples

3.3. Neuromodulation in Epilepsy. Brain Stimulation for Diagnosis and Treatment
- 3.3.1. Basis and Rationale of Neuromodulation for the Diagnosis of Epilepsy
- 3.3.2. Neuromodulation Applied to the Treatment of Epilepsy. Indications and Practical Examples

3.4. Deep Brain Stimulation (DBS)
- 3.4.1. Use of DBS in Parkinson's Disease (PD)
- 3.4.2. How does DBS Work?
- 3.4.3. Clinical Indications for DBS in PD and other Movement Disorders

3.5. Vagus Nerve Stimulation (VNS) and Hypoglossal Nerve Stimulation (VNS). Stimulation of other Peripheral Nerves (trigeminal, tibial, occipital, sacral)
- 3.5.1. Vagus Nerve Stimulation for the Treatment of Epilepsy and Other Indications
- 3.5.2. Stimulation of the Hypoglossal Nerve for the Treatment of OSAHS
- 3.5.3. Stimulation of other Peripheral Nerves (trigeminal, occipital, tibial and sacral)

3.6. Hearing Implants
- 3.6.1. Definition and Fundamentals of Hearing Implants
- 3.6.2. Types of Hearing Implants: Cochlear and Brainstem implants

3.7. Noninvasive Brain Stimulation (NIBS): Physiological Basis
- 3.7.1. Physiological Bases of NIDC
- 3.7.2. Types of NCTS: Transcranial Electrical Stimulation (TENS) and Transcranial Magnetic Stimulation (TMS)

3.8. Noninvasive Brain Stimulation: Indications and Therapeutic Protocols
- 3.8.1. Indications for NCDI
- 3.8.2. Scientific Evidence and Therapeutic Protocols

3.9. TENS
- 3.9.1. Definition, Mechanism of Action and Modalities
- 3.9.2. Indications, Contraindications and Effects

3.10. Botulinum Toxin Infiltration with Guidance by Neurophysiological Techniques
- 3.10.1. Botulinum Toxin. Therapeutic and Adverse Effects
- 3.10.2. Application of Botulinum Toxin in Cervical Dystonia, Blepharospasm, Facial Myokymia, Oromandibular Dystonia, Upper Extremity and Trunk Dystonia
- 3.10.3. Case Studies

- 3.10.3. Case Studies

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.

*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 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.

*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:**

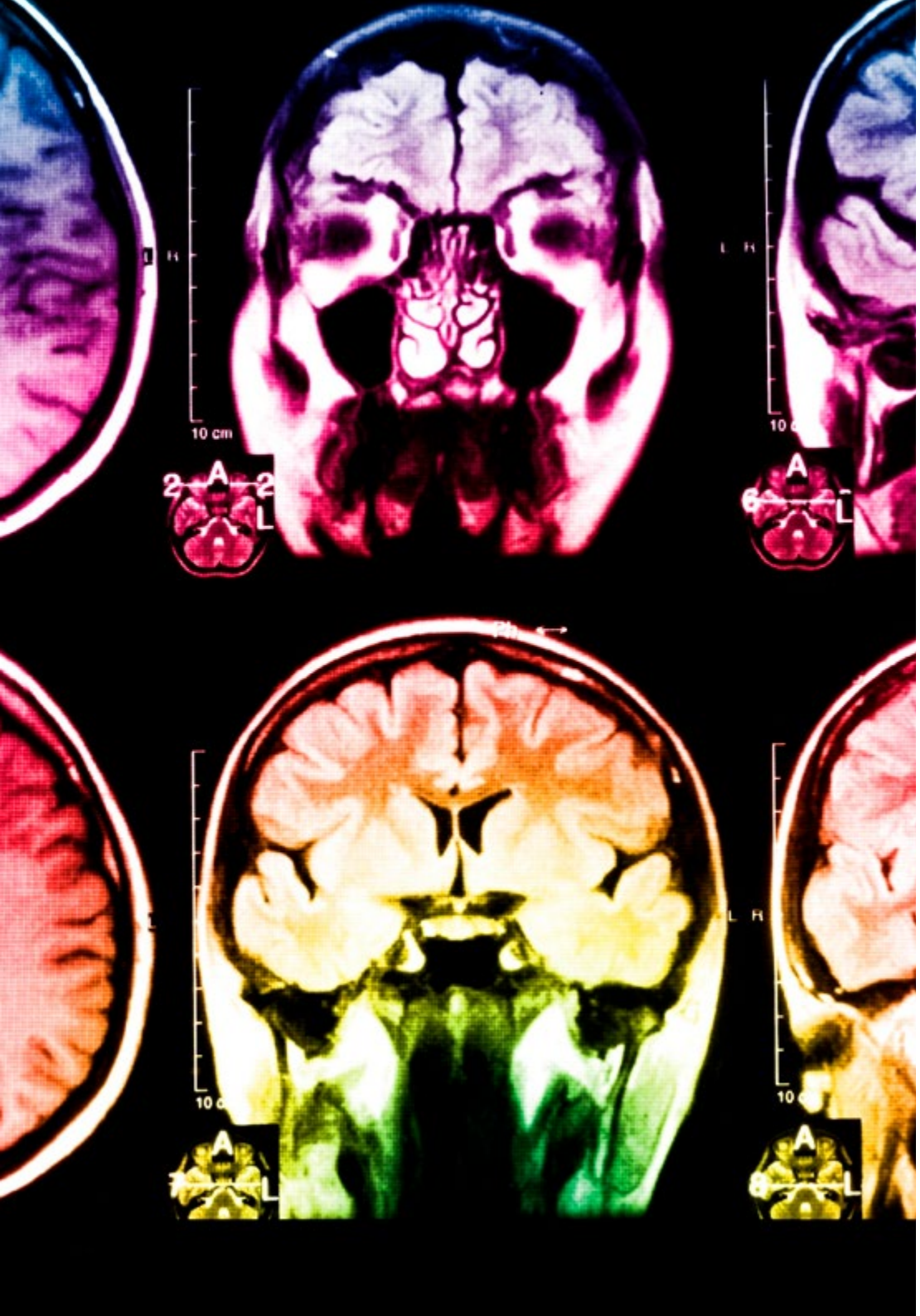
1. Students who follow this method not only achieve the assimilation of concepts, but also a development of their mental capacity, through exercises that evaluate real situations and the application of knowledge.
2. Learning is solidly translated into practical skills that allow the student to better 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 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.

*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.

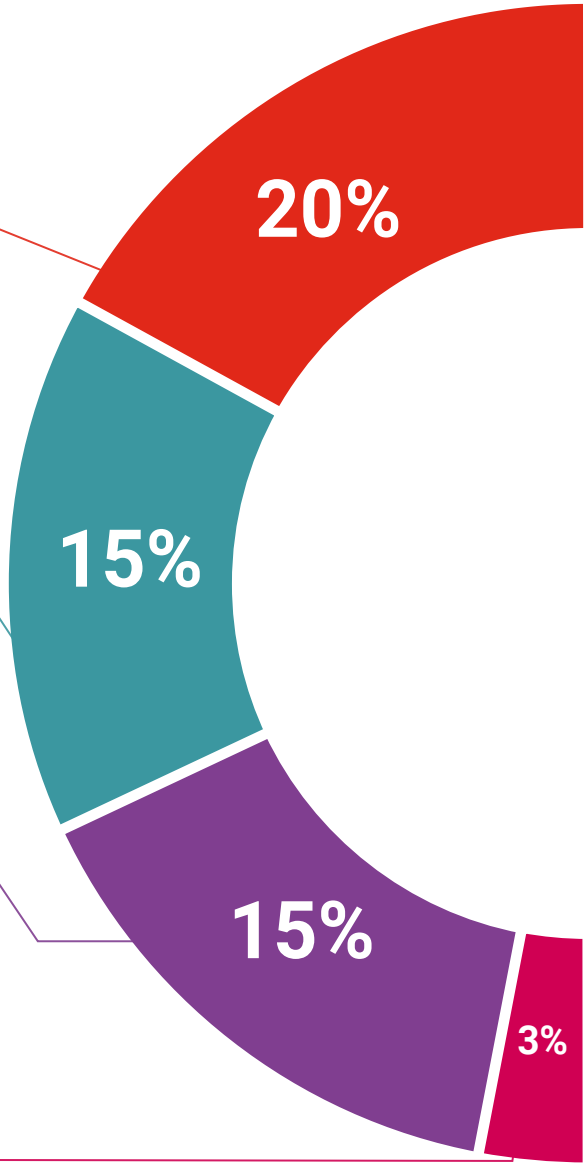
### Interactive Summaries

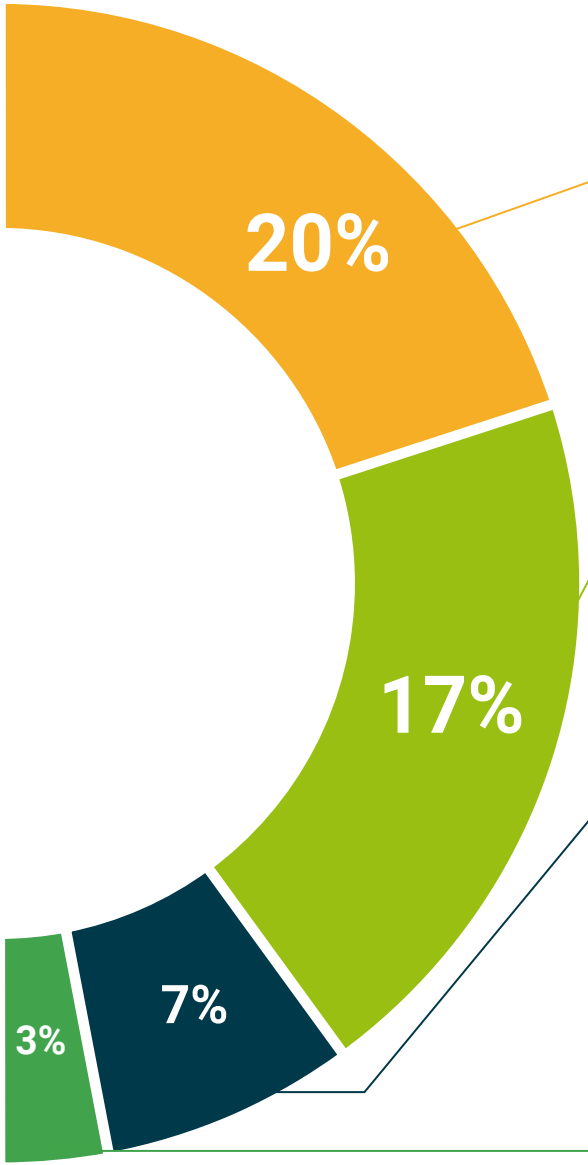
The TECH team presents the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

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 & 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 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.

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# Certificate

The Postgraduate Diploma in Evoked Potentials, Intraoperative Monitoring and Neurophysiological Techniques for Therapeutic Purposes guarantees, in addition to the most rigorous and up to date training, access to a Postgraduate Diploma issued by TECH Technological University.

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

This **Postgraduate Diploma in Evoked Potentials, Intraoperative Monitoring and Neurophysiological Techniques for Therapeutic Purposes** contains the most complete and up to date scientific program on the market.

After passing the evaluation, the student will receive the corresponding **Postgraduate Diploma** issued by **TECH Technological University** via tracked delivery*.

This course contributes in a relevant way to the development of the professional's continuing education and provides a high university curricular value to their training, and is 100% valid in all public examinations, professional career and labor exchanges of any Spanish Autonomous Community.

Title: **Postgraduate Diploma in Evoked Potentials, Intraoperative Monitoring and Neurophysiological Techniques for Therapeutic Purposes**

ECTS: **18**

Official Number of Hours: **450 hours.**


tech technological university

Awards the following

CERTICATE

to

Mr./Ms. _____, with identification number _____.

For having passed and accredited the following program

POSTGRADUATE DIPLOMA

in

Evoked Potentials, Intraoperative Monitoring and Neurophysiological Techniques for Therapeutic Purposes

This is a qualification awarded by this University, with 18 ECTS credits and equivalent to 450 hours, with a start date of dd/mm/yyyy and an end date of dd/mm/yyyy.

TECH is a Private Institution of Higher Education recognized by the Ministry of Public Education as of June 28, 2018.

June 17, 2020

Tere Guevara Navarro

Dean

This qualification must always be accompanied by the university degree issued by the competent authority to practice professionally in each country. Unique TECH Code: AFWORD23S techtitute.com/certificates

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

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# Postgraduate Diploma

## Evoked Potentials, Intraoperative Monitoring and Neurophysiological Techniques for Therapeutic Purposes

- Modality: **online**
- Duration: **6 months**
- Certificate: **TECH Technological University**
- Dedication: **16h/week**
- Schedule: **at your own pace**
- Exams: **online**

# Postgraduate Diploma

## Evoked Potentials, Intraoperative Monitoring and Neurophysiological Techniques for Therapeutic Purposes

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