

# Postgraduate Diploma

Physiotherapeutic Approach to  
Complications in Acquired Brain Injury  
for the Rehabilitation Physician





## Postgraduate Diploma Physical Therapy Approach of Complications in Acquired Brain Injury Acquired for the Physician Rehabilitator

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

Website: [www.techtute.com/in/medicine/postgraduate-diploma/postgraduate-diploma-physiotherapeutic-approach-complications-acquired-brain-injury-rehabilitation-physician](http://www.techtute.com/in/medicine/postgraduate-diploma/postgraduate-diploma-physiotherapeutic-approach-complications-acquired-brain-injury-rehabilitation-physician)

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# 01

# Introduction

The rehabilitation physician faces the daily challenge of dealing with the treatment of Acquired Brain Injury (ABI), especially in cases of stroke, the leading cause of disability in Spain. Specialization in Neurorehabilitation and Physiotherapy becomes, in this scenario, an indispensable element.





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*This program will provide you with a sense of confidence in medical practice, which will help you grow personally and professionally”*

This, coupled with the public's awareness of the need for specialized professionals, is leading to an increase in the demand for rehabilitation physicians who are able to understand the functioning of the nervous system after an injury and to get the most out of it in order 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 Neurological Physiotherapist, whether or not dealing with ACD, will find a space to update their knowledge and reach the super specialization 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 physical therapist whose patient is not specifically one suffering from an ACD or neurological pathology, yet needs to know the ins and outs of the nervous system to better understand and address the injury or therapeutic need for which he or she is consulted.

The **Postgraduate Diploma in Physiotherapeutic Approach to Complications in Acquired Brain Injury for the Rehabilitation Physician** contains the most complete and up-to-date scientific program on the market. The most important features of the program include:

- ♦ Practical cases presented by experts in the Physiotherapeutic Approach to Complications in Acquired Brain Injury
- ♦ 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
- ♦ Latest innovations on the Physiotherapeutic Approach to Complications in Acquired Brain Injury
- ♦ It contains practical exercises where the self-evaluation process can be carried out to improve learning
- ♦ With special emphasis on innovative methodologies in Physiotherapeutic approach to complications in acquired brain injury
- ♦ 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 with the Postgraduate Diploma in Physiotherapeutic Approach to Complications in Acquired Brain Injury for the Rehabilitation Physician"*



“ *This Postgraduate Diploma may be the best investment you can make in selecting an up-to-date program for two reasons: in addition to updating your knowledge in Physiotherapeutic Approach to Complications in Acquired Brain Injury for the Rehabilitation Physician, you will earn a Postgraduate Diploma from TECH*”

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 throughout the program. For this purpose, the student will be assisted by an innovative interactive video system created by renowned and experienced experts.

*Increase your decision-making confidence by updating your knowledge with this University Expert course.*

*Take the opportunity to learn about the latest advances in Physiotherapy Approach to Complications in Acquired Brain Injury.*



# 02 Objectives

The Postgraduate Diploma in Physiotherapeutic Approach to Complications in Acquired Brain Injury for the Rehabilitation Physician is oriented to facilitate the performance of the physiotherapist 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 Postgraduate Diploma that will propel you to the forefront of your industry”*



## General Objectives

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- Enable specialization of the physiotherapist in the field of neurological rehabilitation
- Update Physiotherapist knowledge in neuroscience applied to clinical practice
- Enhance clinical practice that is based on scientific evidence and clinical reasoning
- Facilitate the integral care of the neurological patient in all their complexity





## Specific Objectives

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### Module 1. ABI

- ♦ Recognize what is and what is not ABI
- ♦ Identify different symptoms and syndromes according to the area affected by the ABI
- ♦ Learn to identify hemineglect and understand its implications for the patient and for the therapeutic approach
- ♦ Learn to recognize the pusher syndrome and gain up-to-date knowledge about it in view of its implications in the therapeutic approach
- ♦ Understand the difference between cerebellar versus basal ganglia symptomatology
- ♦ Distinguish spasticity from other tone disturbances
- ♦ Recognize apraxia and its implications for the patient and for the therapeutic approach
- ♦ Learn to identify alien hand syndrome

### Module 2. Complications in Patients with ABI

- ♦ Revise the most frequent complication of patients with ABI to prevent them or alleviate them
- ♦ Learn to identify pain and how to approach it
- ♦ Identify the factors which provoke shoulder pain, how to prevent it and how to approach it once it appears
- ♦ Recognize respiratory complications and know their approach from a physiotherapy point of view
- ♦ Learn to identify the signs and symptoms of complications that must be referred to other professionals

### Module 3. ABI in Altered States of Consciousness

- ♦ Review the neurophysiology of consciousness
- ♦ Learn to evaluate the grade of alteration of consciousness
- ♦ Learn to estimate a prognosis based on examination and evolution
- ♦ Identify the appearance of pain in people with altered consciousness
- ♦ Learn to program a physiotherapeutic approach protocol



*Get up to speed with efficiency and convenience and make a breakthrough in your professional program"*



03

# Course Management

Within the concept of total quality of our program, we are proud to put at your disposal a Teaching Staff of the highest level, chosen for their proven experience. Professionals from different areas and fields of expertise that make up a complete, multidisciplinary team. A unique opportunity to learn from the best.





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*An impressive teaching staff, made up of professionals from different areas of expertise, will be your teachers during your training: a unique opportunity not to be missed”*

## 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

### Dr. Rubiño, José Ángel

- ♦ Neuropsychologist
- ♦ PhD in Neuroscience. University of the Balearic Islands

### Mr. Díez, Óscar

- ♦ Clinical Manager in Neurem Functional Recovery SCP
- ♦ Physiotherapist

### Mr. Montero Leyva, José Luis

- ♦ Physiotherapist at Beato Fray Leopoldo Residence. Rehabilitation Coordinator

### Ms. Aguado Caro, Patricia

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

### Dr. Gómez Soriano, Julio

- ♦ Head of the Research Group in Physiotherapy Toledo (GIFTO) University School of Nursing and Physiotherapy of Toledo University of Castilla La Mancha (UCLM)
- ♦ Sensory-Motor function National Hospital of Paraplegics Toledo
- ♦ Diploma in Physiotherapy
- ♦ Degree in Physical Activity and Sports Sciences from UCLM.

Master's Degree in Neurological Pathology and PhD from Rey Juan Carlos University

### Ms. Monís Rufino, Estela

- ♦ Neurophysiotherapist
- ♦ Neurointegra



**Mr. Rubiño Díaz, José Ángel**

- ♦ Collaborating Researcher in the University of the Balearic Islands
- ♦ General Health Psychologist
- ♦ PhD in Neuroscience. University of the Balearic Islands
- ♦ Advanced Studies Certificate in Psychobiology
- ♦ Master's Degree in Neuroscience

**Ms. Amor Hernández, Paloma**

- ♦ Psychologist
- ♦ Currently studying a PhD in Health Psychology from the National University of Remote Education

**Dr Bravo, Elisabeth**

- ♦ University School of Nursing and Physiotherapy in Toledo University of Castilla La Mancha,
- ♦ He has been a member of the CSIC bioengineering group and did his thesis in the Sensory Motor Function group at the National Hospital of Paraplegics.
- ♦ Associate PhD Professor
- ♦ Master's Degree in Study and Treatment of Pain

**Mr. Ruiz García, Pablo**

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

**Mr. Pérez Miralles, José Antonio**

- ♦ Physiotherapist in the New Option Association of Acquired Cerebral Damage Valencia
- ♦ Diploma in Physiotherapy
- ♦ Specialist in Neurological Physiotherapy

**Mr. Moreno Martínez, Alejandro**

- ♦ Physiotherapy in Pediatrics and Early Care Dry Needling in Myofascial Pain Syndrome
- ♦ Specialist in Orthopedic Manual Therapy
- ♦ Master's Degree in Advanced Manual Physiotherapy
- ♦ Postgraduate Diploma Respiratory Physiotherapy

**Ms. De la Fuente, Rebeca**

- ♦ Attending Physician in the Neurology Unit of the Leon University Care Complex
- ♦ Degree in Medicine from the University of Salamanca
- ♦ Neurology Specialist in Salamanca University Hospital
- ♦ Master's Degree in Neuro-immunology from the Autonomous University Madrid

**Ms. Lara, Lidia**

- ♦ Attending Physician in the Neurology Department of León Care Complex
- ♦ Degree in Medicine and Surgery
- ♦ Specialist Degree in Neurology

**Dr. Mendoza González, Lucrecia**

- ♦ Medical Specialist in Physical Medicine and Rehabilitation
- ♦ Master's Degree in Evaluative Medicine and Medical Expertise
- ♦ Specialist Degree in Child Disability
- ♦ Expert in Child Rehabilitation
- ♦ Expert in Musculoskeletal Ultrasound

**Pérez Rodríguez, Mónica**

- ♦ Neuropsychologist in Neurointegra
- ♦ Psychologist
- ♦ Master's Degree in Advanced Studies of the Brain and Behavior
- ♦ Master's Degree in General Health Psychology
- ♦ Specialist in Neuropsychology

04

# Structure and Content

A tailor-made program that is taught in a 100% online format, so you can choose the time and place that best suits your availability, schedule and interests.

Throughout this program you will go through a complete and well-structured agenda that will allow you to know each and every one of the essential aspects for your work.

A stimulating experience that will lay the foundation for your success.





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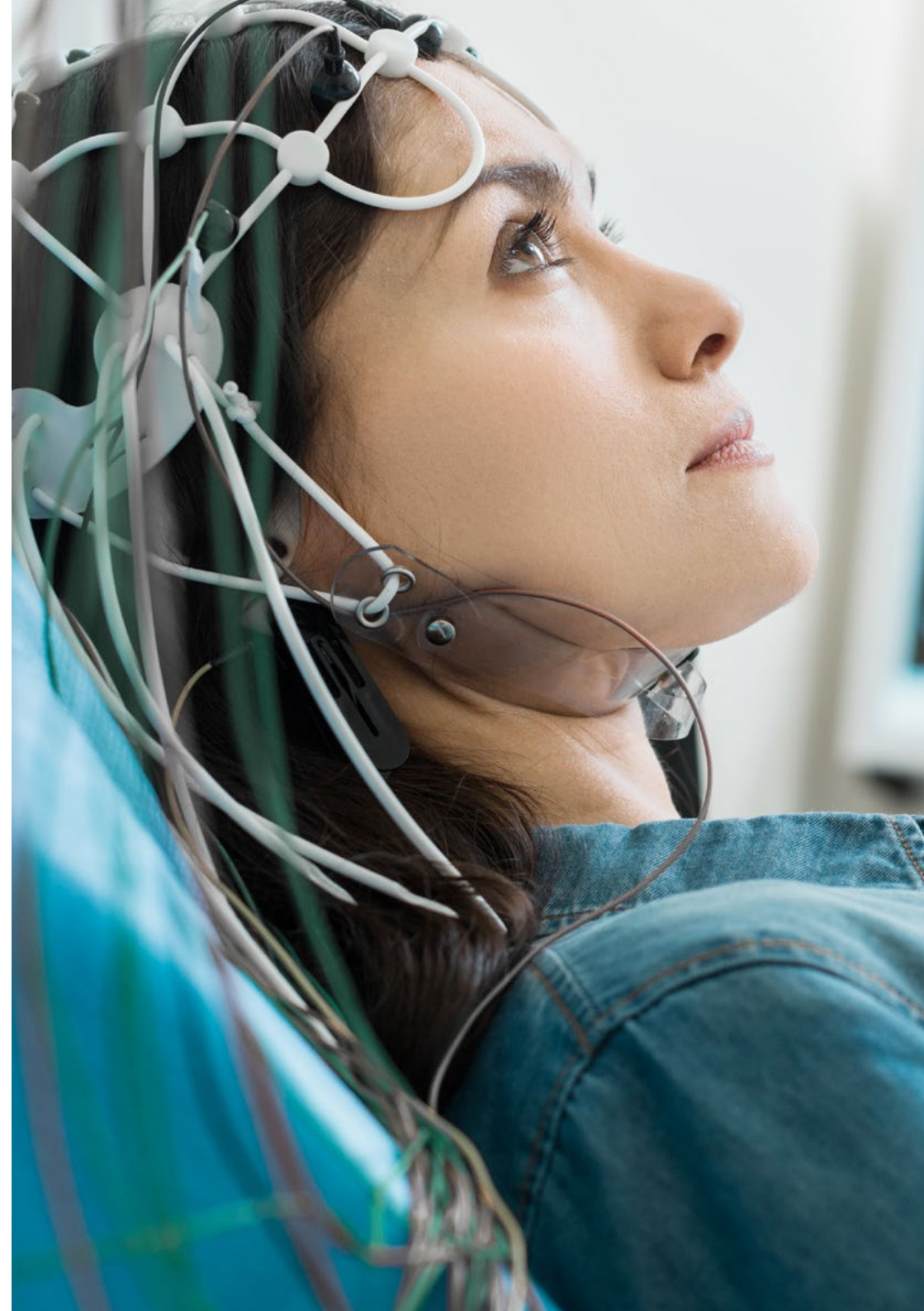
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Physiotherapeutic Approach to Complications  
in Acquired Brain Injury for the Rehabilitation  
Physician contains the most complete and  
up-to-date scientific program on the market"*

## Module 1. ABI

- 1.1. Defining ABI
  - 1.1.1. ABI in Adults
  - 1.1.2. ABI in Childhood
  - 1.1.3. ABI in Elderly People
- 1.2. Functional Alterations
  - 1.2.1. Tone Alterations
  - 1.2.2. Hemineglect
  - 1.2.3. Pusher Syndrome
  - 1.2.4. Cerebellar Syndrome vs. Basal Ganglia Injury
  - 1.2.5. Alien Hand Syndrome
  - 1.2.6. Apraxia

## Module 2. Complications in Patients with ABI

- 2.1. Pain
  - 2.1.1. Comprehensive Pain Assessment
  - 2.1.2. Painful Shoulder
  - 2.1.3. Neuropathic Pain
- 2.2. Respiratory System.
  - 2.2.1. Associated Respiratory Complications
  - 2.2.2. Respiratory Physiotherapy
- 2.3. Epilepsy
  - 2.3.1. Injury Prevention
  - 2.3.2. Injury Recovery
- 2.4. Musculoskeletal Complications
  - 2.4.1. Comprehensive Assessment
  - 2.4.2. Physiotherapy Applied to These Complications
  - 2.4.3. Monitoring Injuries
- 2.5. Complications of Spinal Cord Injury
  - 2.5.1. Characteristics of Such Complications
  - 2.5.2. Physiotherapy Approach





### Module 3. ABI in Altered States of Consciousness

- 3.1. What is an Altered State of Consciousness?
  - 3.1.1. Arousal
  - 3.1.2. Awareness
  - 3.1.3. Neuroanatomy
  - 3.1.4. Neurophysiology
  - 3.1.5. Neuroplasticity.
  - 3.1.6. Prognosis
- 3.2. Evaluation
  - 3.2.1. Physical Exploration
  - 3.2.2. Neurological Assessment Scales
  - 3.2.3. Pain
- 3.3. Intervention
  - 3.3.1. Physiotherapy
    - 3.3.1.1. Stimulation.
    - 3.3.1.2. Movement
    - 3.3.1.3. Environment.
  - 3.3.2. Equipment



*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

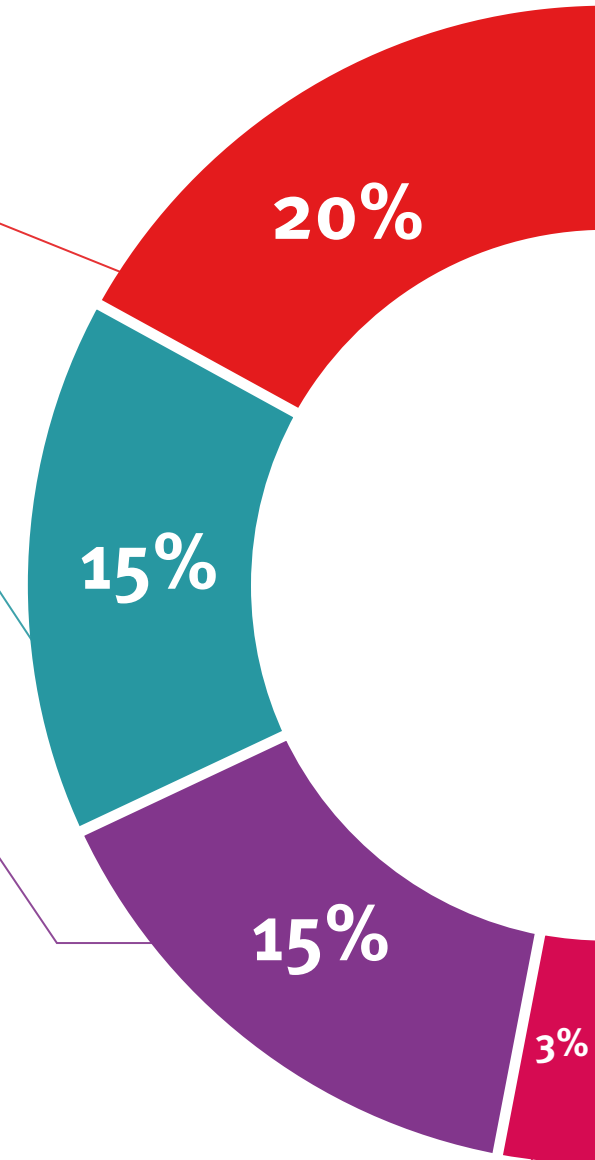
The TECH team presents the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

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

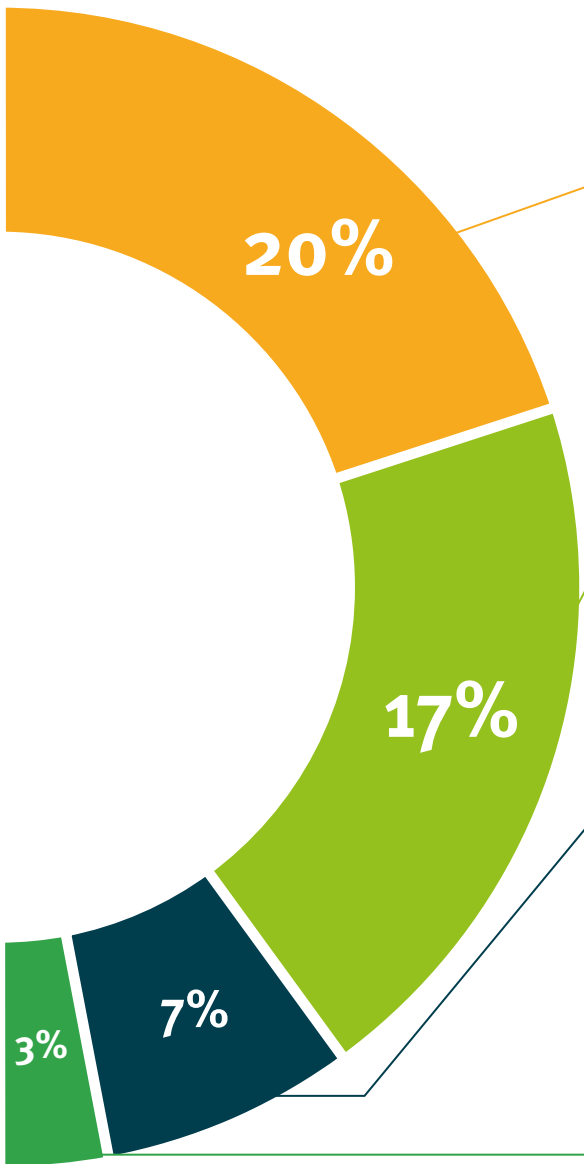


#### Additional Reading

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 Diploma in Physiotherapy Approach to Complications in Acquired Brain Injury for the Rehabilitation Physician guarantees students, in addition to the most rigorous and up-to-date education, access to a Postgraduate Diploma 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”*

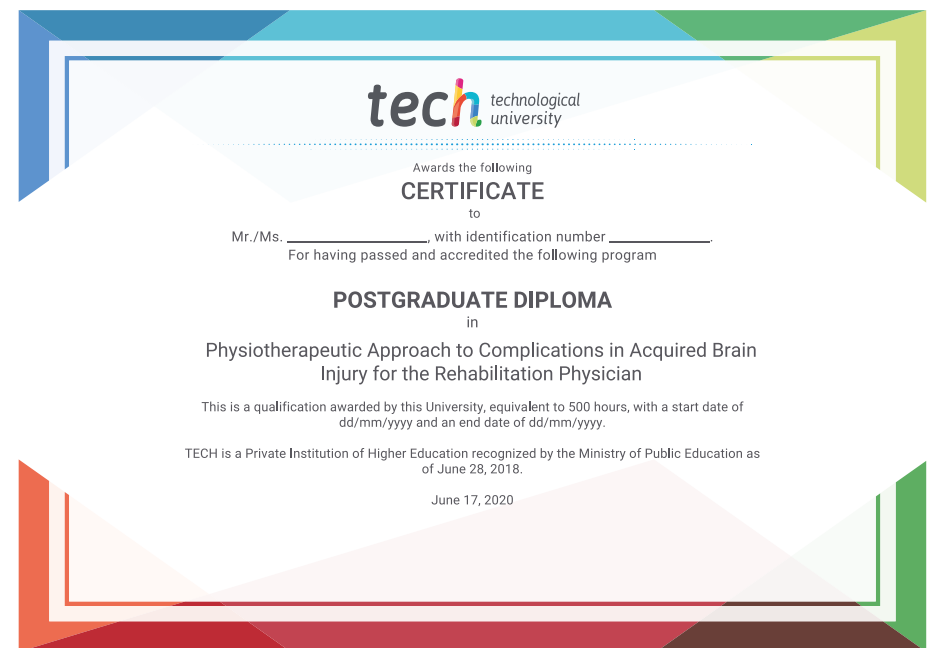
This **Postgraduate Diploma in Physiotherapeutic Approach to Complications in Acquired Brain Injury for the Rehabilitation Physician** contains the most complete and up-to-date scientific program on the market.

After the student has passed the assessments, they will receive their corresponding **Postgraduate Diploma** issued by **TECH Technological University** via tracked delivery\*.

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

Title: **Postgraduate Diploma in Physiotherapeutic Approach to Complications in Acquired Brain Injury for the Rehabilitation Physician.**

Official N° of Hours: 525 h.



\*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.



future  
health confidence people  
education information tutors  
guarantee accreditation teaching  
institutions technology learning  
community commitment  
personalized service innovation  
knowledge present  
development languages  
virtual classroom



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Physical Therapy Approach  
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- » Modality: **online**
- » Duration: **6 months**
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- » Dedication: **16h/week**
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- » Exams: **online**

# Postgraduate Diploma

Physiotherapeutic Approach to  
Complications in Acquired Brain  
Injury for the Rehabilitation Physician

