



Postgraduate Certificate

Principles of Neurosciences

» Modality: online

» Duration: 6 weeks

» Certificate: TECH Technological University

» Dedication: 16h/week

» Schedule: at your own pace

» Exams: online

We bsite: www.techtitute.com/pk/physiotherapy/postgraduate-certificate/principles-neurosciences

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tech 06 | Introduction

Neuroscience has become a fundamental pillar for many disciplines in recent years. With a very simple premise, it is the science that is interested in understanding the brain as a modeling organ, organizer and creator of every aspect of human life, including pleasant and unpleasant constructs, such as pain. Therefore, the new scientific procedures of exploration in this field have opened a new panorama toward a deeper understanding of cognitive processes.

Based on the above, we have created a program focused on learning the bases and main elements of neuroeducation and the fundamentals of the nervous system and neuronal connections. This will allow students to identify the brain mechanisms underlying learning, memory, language, sensory and motor systems, attention, emotions and the influence of the environment on all of these.

All the content is available in a 100% online Postgraduate Certificate that gives students the ease of being able to study it comfortably, wherever and whenever they want. Students will only need a device with internet access to take their career one step further. A modality according to the current times with all the guarantees to position professionals in a highly demanded sector.

This **Postgraduate Certificate in Principles of Neurosciences** contains the most complete and up-to-date scientific program on the market. The most important features include:

- Practical cases presented by experts in Neuroeducation
- 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
- 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



The brain is a complex and complete organ: understand how it works at a global level to take your career to the next level"



Through case studies you will be able to identify real situations in a work environment and create a strategy that will help you in different scenarios"

The program's teaching staff includes professionals from the sector who contribute their work experience to this educational program, as well as renowned specialists from leading societies and prestigious universities.

Its multimedia content, developed with the latest educational technology, will allow professionals to learn in a contextual and situated learning environment, i.e., a simulated environment that will provide immersive education programmed to prepare in real situations.

The design of this program focuses on Problem-Based Learning, by means of which professionals must try to solve the different professional practice situations that arise during the academic year. This will be done with the help of an innovative system of interactive videos made by renowned experts.

It has an excellent faculty and a program that is at the forefront in the field of Neuroscience.

It knows the brain mechanisms underlying learning, memory, language, sensory and motor systems.







tech 10 | Objectives



General Objectives

- Know the basis and main elements in Neuroeducation
- Integrate the new contributions of brain science in the teaching-learning processes



With a 100% online program, you will have the tools you need to complete this Postgraduate Certificate"







Specific Objectives

- Describe the functioning of the nervous system
- Explain the basic anatomy of learning-related structures
- Define the basic physiology of learning-related structures
- Identify the main brain structures related to motor skills
- Define the plastic brain and neuroplasticity
- Explain the effects of environment on brain development
- Describe the changes in the infant's brain
- Explain the evolution of the adolescent brain
- Define the characteristics of the adult brain







tech 14 | Course Management

Management



Ms. Pellicer Royo, Irene

- Master's Degree in Emotional Education and Well-being
- Postgraduate in Neuroeducation
- Certificate in Management and Administration of Sports Entities
- Degree in Physical Activity and Sports Science Master's Degree in Medical Sciences applied to Physical Activity and Sport

Professors

Dr. De la Serna, Juan Moisés

- Doctor in Psychology Master's Degree in Neurosciences and Behavioral Biology
- University Specialist in Clinical Hypnosis
- Director of the Open Chair in Psychology and Neurosciences
- Diploma in Didactic Methodology Expert in Project Management Occupational Trainer

Dr. Navarro Ardoy, Daniel

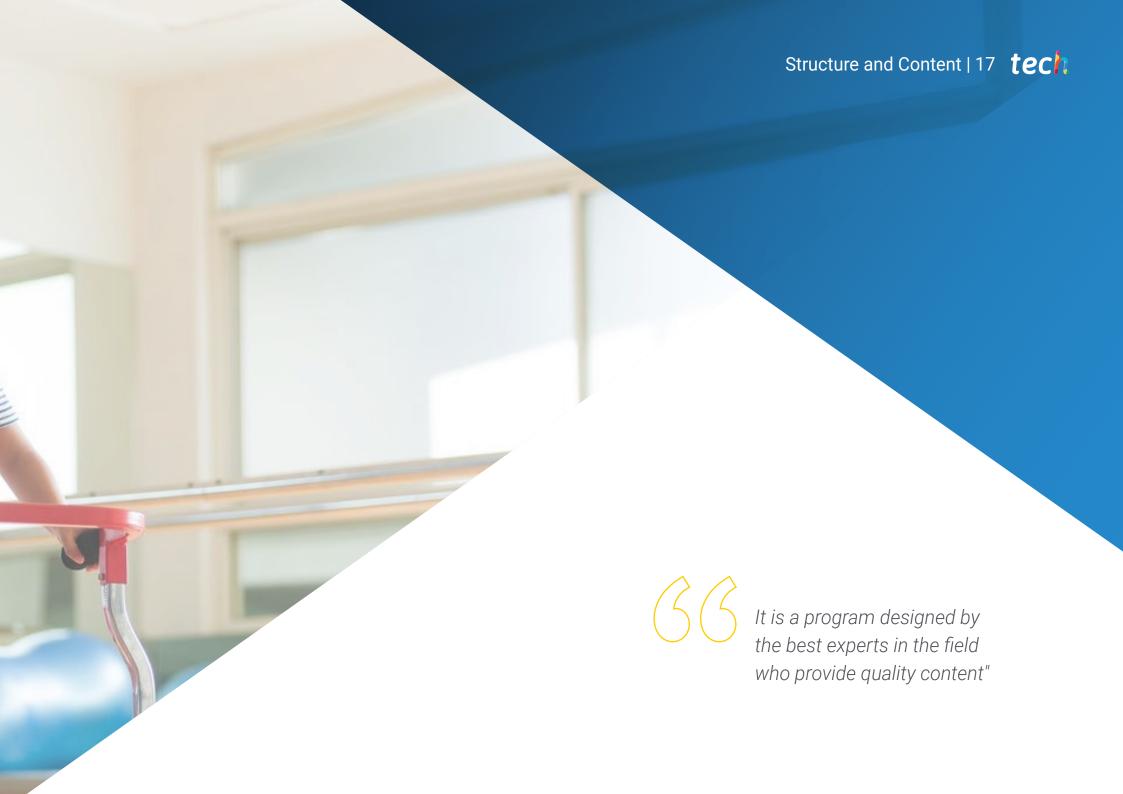
- PhD. Exercise Physiology Applied to Health Physical activity and health program Faculty of Medicine
- Degree in Physical Activity and Sports Science

Ms. Rodríguez Ruiz, Celia

- Specialization in clinical psychology and child psychotherapy
- Specialization in Cognitive Behavioral Therapy in Childhood and Adolescence
- Degree in Pedagogy
- Degree in Psychology







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Module 1. Basis of Neurosciences

- 1.1. The Nervous System
 - 1.1.1. Definition of the Nervous System
 - 1.1.2. Components of the Nervous System
 - 1.1.3. Classification of the Nervous Tissue
 - 1.1.4. Electrical Communication of the Neuron
 - 1.1.5. Chemical Communication of the Neuron
- 1.2. Basic Anatomy of Learning-Related Structures
 - 1.2.1. Defining Learning
 - 1.2.2. Classification of the Brain
 - 1.2.3. Formation of the Brain
 - 1.2.4. The Role of the Brain in Learning
- 1.3. Psychological Processes Related to Learning
 - 1.3.1. Defining Cognitive Processes
 - 1.3.2. The Cognitive Process of Sensation
 - 1.3.3. The Cognitive Process of Perception
 - 1.3.4. The Cognitive Process of Attention
 - 1.3.5. The Cognitive Process of Memory
 - 1.3.6. The Cognitive Process of Language
 - 1.3.7. The Cognitive Process of Emotion
 - 1.3.8. The Cognitive Process of Motivation
- 1.4. The Main Brain Structures Related to Motor Skills
 - 1.4.1. Psychomotor Skills
 - 1.4.2. Neural Bases of Motor Skills
 - 1.4.3. Motor Problems in Development
 - 1.4.4. Acquired Motor Problems
- 1.5. The Plastic Brain and Neuroplasticity
 - 1.5.1. Neuronal Plasticity
 - 1.5.2. The Plastic Brain
 - 1.5.3. Neurogenesis
 - 1.5.4. The Plastic Brain and Learning





Structure and Content | 19 tech

- 1.6. Epigenetics.
 - 1.6.1. The Role of Genetics in the Brain
 - 1.6.2. The Process of Gestation and the Brain
 - 1.6.3. Definition of Undifferentiated Neurons
 - 1.6.4. The Process of Programmed Neuronal Death
- 1.7. Effects of the Environment on Brain Development
 - 1.7.1. Brain and Environment
 - 1.7.2. Interneuronal Connectivity
 - 1.7.3. Inhibition of Connectivity
- 1.8. Changes in the Infant's Brain.
 - 1.8.1. The Formation of the Infant's Brain
 - 1.8.2. The Process of Myelogenesis
 - 1.8.3. Brain Development
 - 1.8.4. Development of Localization
 - 1.8.5. Development of Lateralization
- 1.9. Evolution of the Adolescent Brain
 - 1.9.1. Defining Adolescence
 - 1.9.2. The Adolescent Brain
 - 1.9.3. The Role of Hormones
 - 1.9.4. Functions of Neurohormones
- 1.10. The Adult Brain
 - 1.10.1. The Adult Brain
 - 1.10.2. Connections Between the Cerebral Hemispheres
 - 1.10.3. Language Processing and the Cerebral Hemispheres

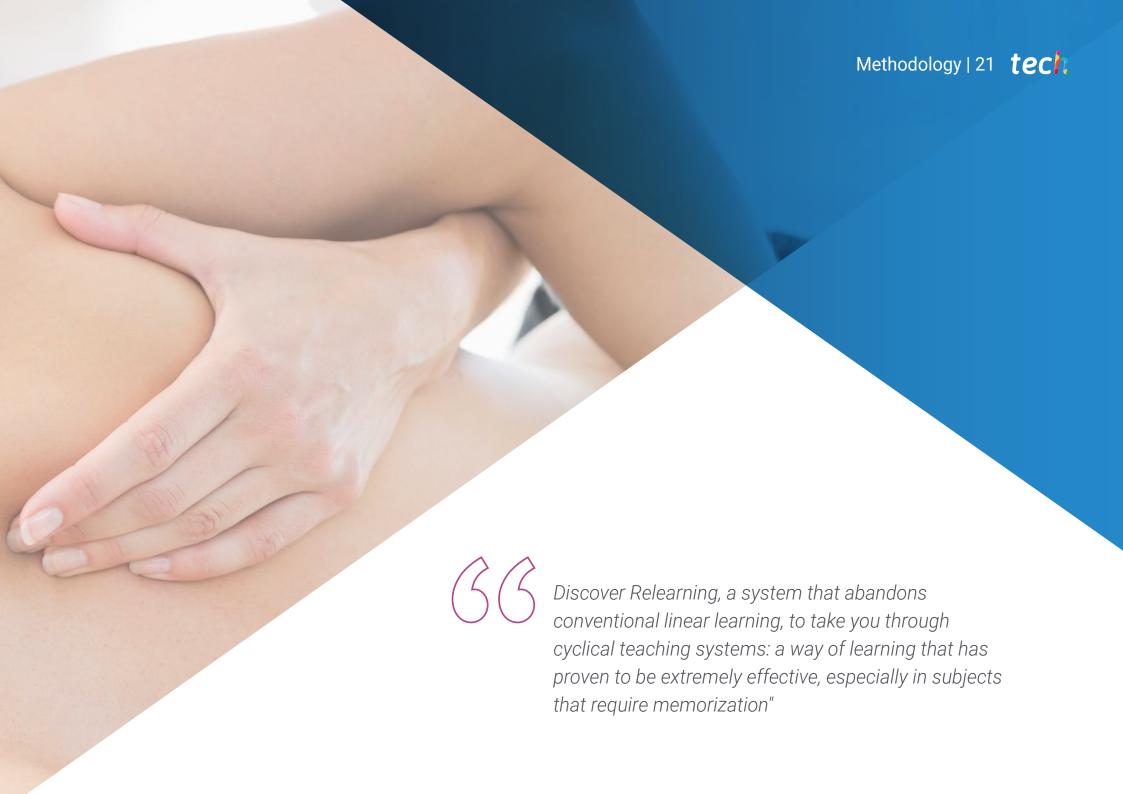


The best way to improve your practice with your patients is to know how their brain works at the synapse level"



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.

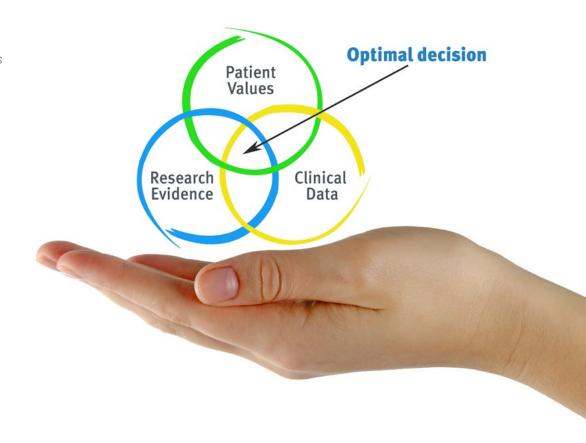




At TECH we use the Case Method

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. Physiotherapists/kinesiologists 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 of professional physiotherapy 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. Physiotherapists/kinesiologists who follow this method not only grasp concepts, but also develop their mental capacity, by evaluating real situations and applying their knowledge.
- 2. The learning process has a clear focus on practical skills that allow the physiotherapist/kinesiologist 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.





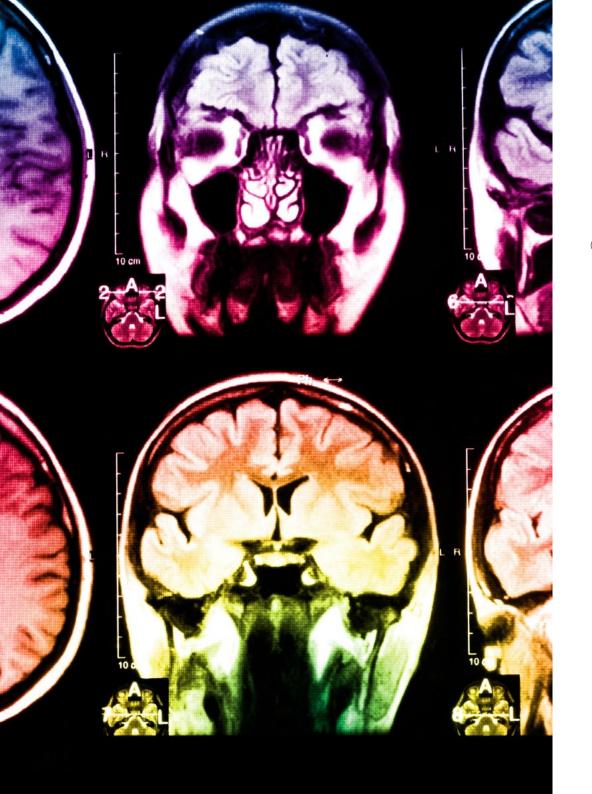
Relearning Methodology

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.

The physiotherapist/kinesiologist will learn through real cases and by solving 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 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 we trained more than 65,000 physiotherapists/kinesiologists with unprecedented success in all clinical specialties, regardless of the workload. 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 training, developing a critical mindset, defending arguments, and contrasting opinions: a direct equation for 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 our learning system is 8.01, according to the highest international standards.

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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 really 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.



Physiotherapy Techniques and Procedures on Video

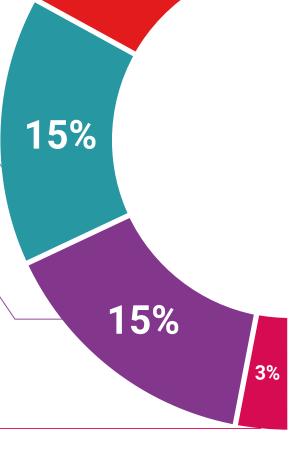
TECH brings students closer to the latest techniques, the latest educational advances and to the forefront of current Physiotherapy techniques and procedures. All of this in direct contact with students and explained in detail so as to aid their assimilation and understanding. And best of all, you can watch them as many times as you want.



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 unique multimedia content presentation training 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.



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.

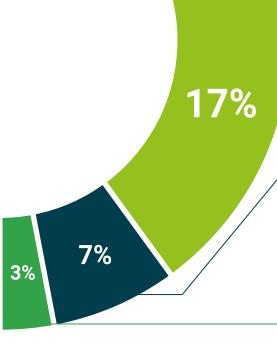
The system known as Learning from an Expert strengthens knowledge and memory, and generates confidence in future difficult decisions.



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.





20%





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This **Postgraduate Certificate in Principles of Neurosciences** contains the most complete and up-to-date scientific program on the market.

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

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

Title: Postgraduate Certificate in Principles of Neurosciences
Official N° of hours: 150 h.

Endorsed by the NBA





Principles of Neurosciences

This is a qualification awarded by this University, equivalent to 150 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 coun

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^{*}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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guarantee accreditation teaching
institutions technology learning
community commitment



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