

Postgraduate Diploma

Neuroeducation, Motor Tasks and Brain Development

Endorsed by the NBA





Postgraduate Diploma Neuroeducation, Motor Tasks and Brain Development

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

Website: www.techtute.com/in/physiotherapy/postgraduate-diploma/postgraduate-diploma-neuroeducation-motor-tasks-brain-development

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01

Introduction

With this high-level educational program, the physical therapist will specialize in Neuroeducation, Motor Tasks and Brain Development under the guidance of professionals with extensive experience in the field. You will learn the latest developments in the sector and will be able to apply them in your daily practice.





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Motor Tasks as promoters of brain development, from the advanced point of view of neurosciences applied to physiotherapy in a Postgraduate Diploma of high academic level"

The new objectives of integral development are increasingly supported by the knowledge and management of brain functioning. Therefore, professional recycling is necessary to include the required knowledge on Neuroeducation, Motor Tasks and Brain Development in Physical Education and to provide the necessary tools to include them in the physiotherapeutic field.

Specialization and education of physiotherapists in neuropsychoeeducation is necessary: understanding the brain mechanisms underlying learning, memory, language, sensory and motor systems, attention, emotions and the influence of the environment on all of these.

Science has advanced in the study of the brain as a learning organ in order to help each person develop their cognitive, intellectual and emotional potential to the fullest. Although current education aims at a comprehensive education, it is still focused on cognitive aspects, with little development in terms of emotional aspects; little and/or no management of one's own and others' emotions, scarce self-motivation, self-control and communication skills.

The prestigious professors of this program have deposited their specialized and advanced knowledge, based on experience and rigorous scientific criteria, in the development of this program of high scientific and academic rigor.

All the modules are accompanied by abundant iconography, with photos and videos of the authors, with which it is intended to illustrate, in a very practical, rigorous and useful way, advanced knowledge in Neuroeducation and physical education for physical therapists.

This **Postgraduate Diploma in Neuroeducation, Motor Tasks and Brain Development** contains the most complete and up-to-date scientific program on the market. The most important features include:

- ♦ Development of case studies presented by experts in Neuroeducation and Physical Education
- ♦ 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
- ♦ It contains practical exercises where the self-evaluation process can be carried out to improve learning
- ♦ With special emphasis on innovative methodologies in Neuroeducation and Physical Education
- ♦ 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
- ♦ Complementary content available in multimedia format



With this Postgraduate Diploma you will be able to learn about the most specific fields of brain development linked to Motor Tasks, from the comfort of your own computer"

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Its syllabus has been chosen and developed by specialists belonging to reference societies and universities of proven prestige, with the best quality in the educational market"

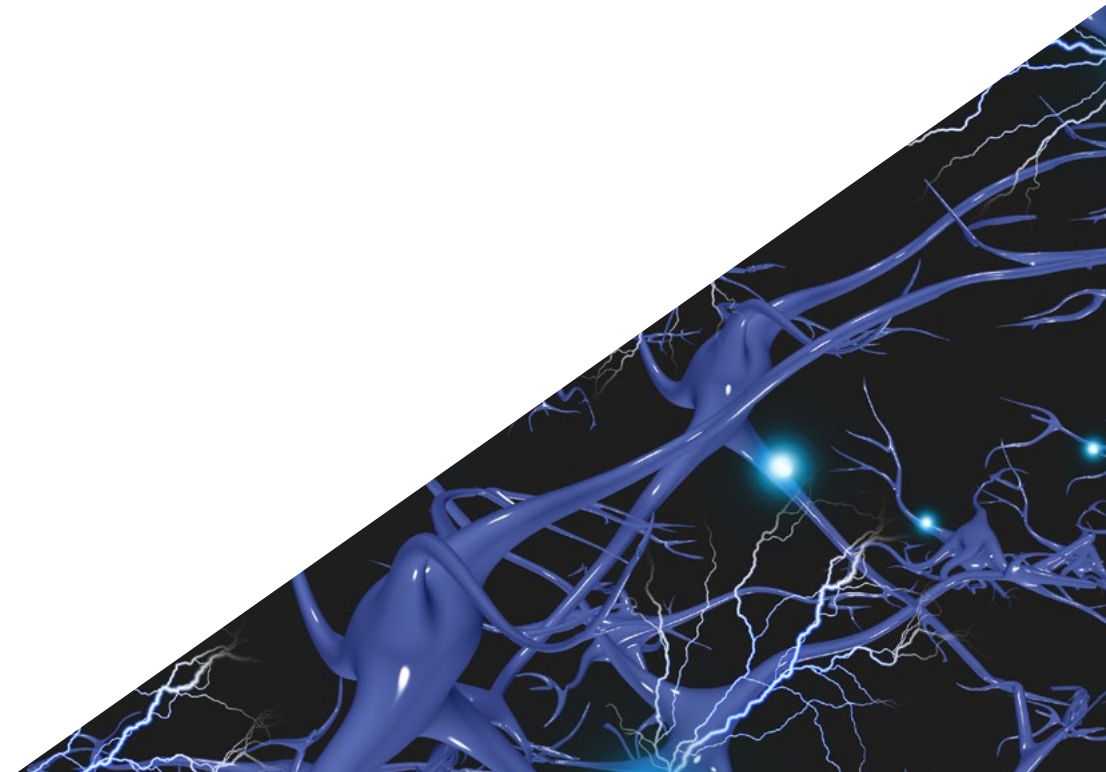
Neurosciences at the service of quality education. Take the next step toward your professional future.

Specialized education that will give a fresh boost to your CV, putting you at the forefront of the profession.

It includes in its teaching staff professionals belonging to the field of Neuroeducation and Physical Education, who bring to this program the experience of their work, in addition to recognized specialists belonging to reference societies and prestigious universities.

Thanks to its multimedia content developed with the latest educational technology, it will allow the professional a situated and contextual learning, that is to say, a simulated environment that will provide an immersive learning programmed to prepare in real situations.

The design of this program focuses on Problem-Based Learning, through which the educator must try to solve the different situations of professional practice that arise throughout the program. For this, the educator will be assisted by an innovative interactive video system, developed by recognized experts in the field of Neuroeducation and Physical Education with extensive teaching experience.



02 Objectives

This comprehensive program is aimed at facilitating the performance of the dedicated professional with the latest advances and most innovative treatments in the sector. Beyond its potential in physical terms, this program will work on its capacity to protect the brain, its influence on brain function, emotions, motivation, perception, in short, learning.





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Physical Neuroeducation and learning: an unstoppable stimulus in the development of one of the most promising subjects in education”



General Objectives

- Know the basis and main elements of Neuroeducation
- Integrate the new contributions of Brain Science in the teaching-learning processes
- Discover how to enhance brain development through motor action
- Implement the innovations of Neuroeducation in the subject of Physical Education
- Achieve specialized education as a Neuroeducation professional in the field of motor action





Specific Objectives

Module 1. Basis of Neurosciences

- ♦ 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

Module 2. Physical Neuroeducation and Learning

- ♦ Explain the relevance of body-brain language together with embodied cognition
- ♦ Establish the importance of mental health with exercise
- ♦ Explain the development of cognitive functions through the practice of physical exercise
- ♦ Know the positive influence of motor skills in students with learning difficulties

Module 3. Motor Practices that Have an Impact on Brain Development

- ♦ Know the importance of expressive and artistic activities and brain development from a socioemotional perspective
- ♦ Identify outdoor activities and brain development
- ♦ Establish the anaerobic and aerobic physical activities that promote brain development in young people

Module 4. Invisible Training in Brain Development

- ♦ Understand the role of the main myokines in relation to exercise and health
- ♦ Identify new postulates for disease prevention and improvement of quality of life in cardiovascular risk diseases (obesity, diabetes or metabolic syndrome)
- ♦ Analyze the relevance of body posture from a neuroscientific point of view



Study in a comfortable and easy way, with unlimited access from any place and at any time thanks to the most powerful digital platform and the most developed interactive learning systems currently available"

03

Course Management

The design and development of this Postgraduate Diploma has been carried out by a renowned multidisciplinary teaching staff. Aiming for excellence, the program puts its expertise at your disposal to create learning situations that will make you become an expert in the field. With the support of the best specialists in Neuroeducation and Physical Education.



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A teaching staff of experts selected for their experience and trajectory in the fields of Neuropsychology and Physical Education that will accompany you throughout the most comprehensive syllabus"

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
- ♦ Certificate 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



04

Structure and Content

The content structure has been created so that students can acquire all the necessary knowledge in the field of neurosciences as applied to Physical Education. Through a complete syllabus, the different fields of interest that the professional will need to master in the exercise of his profession will be developed.





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With the confidence of being part of the world's largest online university, with the most developed teaching software on the market today at your fingertips"

Module 1. Basis of Neurosciences

- 1.1. The Nervous System and Neurons
 - 1.1.1. Introduction
 - 1.1.2. The Nervous System and Neurons
- 1.2. Basic Anatomy of Learning-Related Structures
 - 1.2.1. Structures Related to Learning
 - 1.2.2. Basic Anatomy of Learning-Related Structures
- 1.3. Psychological Processes Related to Learning
 - 1.3.1. Psychological Processes of Learning
- 1.4. The Main Brain Structures Related to Motor Skills
 - 1.4.1. Motricity and Main Brain Structures
- 1.5. The Plastic Brain and Neuroplasticity
 - 1.5.1. What is Brain Plasticity?
 - 1.5.2. Neuroplasticity
- 1.6. Epigenetics
 - 1.6.1. Definition of Epigenetics
- 1.7. Effects of the Environment on Brain Development
 - 1.7.1. Environment and Brain Development
- 1.8. Changes in the Infant's Brain
 - 1.8.1. Infant Brain
- 1.9. Evolution of the Adolescent Brain
 - 1.9.1. Adolescent Brain
- 1.10. The Adult Brain



Module 2. Physical Neuroeducation and Learning

- 2.1. Body-Brain Language and Embodied Cognition
 - 2.1.1. Embodied Cognition
- 2.2. Mental Health and Exercise
- 2.3. Development of Cognitive Functions through Physical Exercise
 - 2.3.1. Cognitive Functions and Physical Exercise
- 2.4. Executive Attention and Exercise
- 2.5. Working Memory in Motor Action
 - 2.5.1. Working Memory
- 2.6. Improvement of Cognitive Performance derived from Motor Action
- 2.7. Academic Results and their Relationship to Physical Practice
- 2.8. Positive Influence of Motor Skills on Students with Learning Difficulties
- 2.9. Pleasure, a Fundamental Element in Physical Neuroeducation
- 2.10. General Recommendations for the Implementation of Didactic Proposals

Module 3. Motor Practices that Have an Impact on Brain Development

- 3.1. Body Wisdom
- 3.2. Aerobic Exercise
- 3.3. Anaerobic Exercise
- 3.4. Play
- 3.5. Muscular Strength
- 3.6. Coordination Activities
- 3.7. Relaxation and Meditation Activities
- 3.8. Expressive and Artistic Activities and Brain Development from a Social-Emotional Perspective
- 3.9. Natural Environment Activities and Brain Development
- 3.10. Global Proposals for Physical Neuroeducation

Module 4. Invisible Training in Brain Development

- 4.1. Invisible Training Concept
- 4.2. The Role of Main Myokines in Relation to Exercise and Health
- 4.3. Nutrition
- 4.4. Relevance of Sleep in Learning
- 4.5. Active Breaks
- 4.6. Prevention of Harmful Habits
- 4.7. Body Posture from a Neuroscientific Perspective
- 4.8. Disease Prevention and Improvement of the Quality of Life in terms of Cardiovascular Risk Diseases (Obesity, Diabetes or Metabolic Syndrome)
- 4.9. Prevention of Diseases and Improvement of the Quality of Life, derived from the Physical Practice at a Mental Level (Alzheimer's, Parkinson's, etc.)
- 4.10. Prevention and Amelioration of Carcinogenic Processes due to Motor Action



A unique, key, and decisive educational 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. 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.

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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. 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.

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.



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.





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 Neuroeducation, Motor Tasks and Brain Development 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 Neuroeducation, Motor Tasks and Brain Development** 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 **certificate** 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 Neuroeducation, Motor Tasks and Brain Development**

Official N° of Hours: **600 h.**

Endorsed by the NBA



*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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