



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

We b site: www.techtitute.com/pk/education/postgraduate-diploma/postgraduate-diploma-neuroeducation-motor-tasks-brain-development

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That physical activity favors the brain development of people, especially children, is a fact that has been proven over time based on the different studies that have been carried out in the field of Neuroscience. Exercise contributes to a better functioning of the nervous system, enhancing, in addition, social and cognitive skills. For this reason, educational plans contemplate motor practice as a priority, thanks to which students can work in an effective and protagonist way in the development of their physical competencies during childhood and adolescence, contributing to a multifactorial neurocognitive growth that favors learning processes in other areas, both in the academic field and in the family and social environment.

Based on the pedagogical innovations in this field, TECH and its team versed in teaching at different levels has designed this complete study in Neuroeducation, Motor Tasks and Brain Development, a cutting-edge program with which the teachers will be able to update their professional practice in just 6 months of 100% online training. Thanks to the exhaustiveness and thoroughness that has been used in the constitution of the syllabus of this program, it has been possible to compact in 600 hours of the best theoretical, practical and additional content all the information that the teacher needs to master to carry out an academic practice based on effective cognitive and psychomotor development through multiple, dynamic and extremely fun exercises for all ages.

In addition, one of the main features of the academic experience is the flexibility of its format, giving the graduates the possibility to access their course from any device with internet connection and to expand each section of the syllabus based on their needs, making use of the extra material included. In this way, you will not have to worry about restricted schedules or face-to-face classes, but you will attend a program that adapts to you and with which you will achieve educational excellence through the development of a new neuro-educational model of the highest level.

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

- Practical cases presented by experts in Neuroeducation
- The graphic, schematic and practical contents of the book provide technical and practical information on those disciplines that are essential for professional practice
- Practical exercises where the self-assessment process can be carried out 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 work intensively on psychomotor learning and the relevance of body-brain language in the motivation of embodied cognition"



Thanks to this Postgraduate Diploma you will be able to improve your teaching skills in the teaching of motor skills to students with learning difficulties"

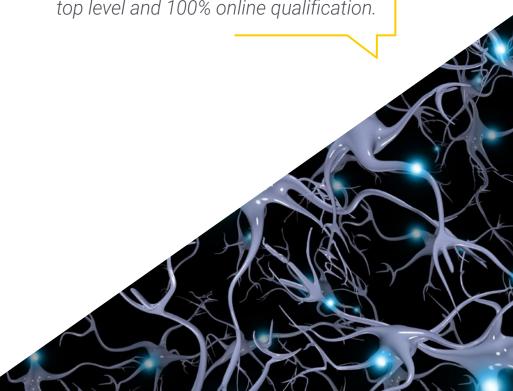
The program's teaching staff includes professionals from sector who contribute their work experience to this program, as well as renowned specialists from leading societies and prestigious universities.

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

This program is designed around Problem-Based Learning, whereby students must try to solve the different professional practice situations that arise throughout the program. For this purpose, students will be assisted by an innovative, interactive video system created by renowned and experienced experts.

You will have access to 600 hours of the best theoretical, practical and additional content to delve in a personalized way in the different sections of the syllabus.

A unique opportunity to work on invisible training in brain development through a top level and 100% online qualification.







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General Objectives

- Implement the innovations of Neuroeducation in the subject of Physical Education
- Achieve specialized training as Neuroeducation professionals in the field of motor action and brain development



The program includes a specific section dedicated to disease prevention through exercise, so that you can teach your students about healthy physical activity through the best didactic strategies"





Module 1. Basis of Neurosciences

- Describe the functioning of the nervous system
- Explain the basic anatomy of structures related to learning
- 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 Affecting Brain Development

- Know the importance of expressive, 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





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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. 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

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







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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



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- 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

Module 2. Physical Neuroeducation and Learning

- 2.1. Body-Brain Language and Embodied Cognition
 - 2.1.1. Conceptualization of Embodied Cognition
 - 2.1.2. Intelligent Behavior Based on Body Brain Environment Interaction
- 2.2. Mental Health and Exercise
 - 2.2.1. What is Meant by Mental Health in this Context?
 - 2.2.2. The Evolutionary Purpose of Motor Action
 - 2.2.3. What if Movement Improved Brain Functioning?

- 2.3. Brain Development Through Physical Exercise
 - 2.3.1. Hippocampus and Basal Ganglia in Relation to Exercise
 - 2.3.2. The Development of the Prefrontal Cortex and Other Brain Structures due to Physical Exercise
- 2.4. Executive Attention and Exercise
 - 2.4.1. The Cognitive Function of Attention
 - 2.4.2. Relationship Between Attention and Exercise
 - 2.4.3. Enhancing Attention
- 2.5. Working Memory in Motor Action
 - 2.5.1. The Cognitive Function of Memory
 - 2.5.2. Working Memory
 - 2.5.3. Relationship Between Memory and Motor Action
 - 2.5.4. Enhancing Memory
- 2.6. Improvement of Cognitive Performance derived from Motor Action
 - 2.6.1. Motor Action Behavior Relationship
 - 2.6.2. Motor Action Brain Health Relationship
- 2.7. Academic Results and their Relationship to Physical Practice
 - 2.7.1. Academic Improvements as a Consequence of Motor Action
 - 2.7.2. Specific Interventions
 - 2.7.3. Prolonged Interventions
 - 2.7.4. Conclusions
- 2.8. Positive Influence of Motor Skills on Students with Learning Difficulties
 - 2.8.1. The Brain in Special Educational Needs
 - 2.8.2. Attention Deficit Hyperactivity Disorder and Motor Action
 - 2.8.3. Specific Proposals for Motor Action
- 2.9. Pleasure, a Fundamental Element in Physical Neuro-Education
 - 2.9.1. Pleasure Systems in the Brain
 - 2.9.2. Relationship Between Pleasure and Learning

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- 2.10. General Recommendations for the Implementation of Teaching Proposals
 - 2.10.1. The Coherence of Action-Research
 - 2.10.2. Concrete Example of an Action—Research Proposal in Physical Neuro-Education
 - 2.10.3. Phases of the Working Process
 - 2.10.4. Criteria, Techniques and Strategies for the Collection of Information
 - 2.10.5. Approximate Schedule of the Planned Phases

Module 3. Motor Practices Affecting Brain Development

- 3.1. Body Wisdom
 - 3.1.1. The Body as a Starting Point
 - 3.1.2. The Languages of the Body
 - 3.1.3. Body Intelligence
- 3.2. Aerobic Exercise
 - 3.2.1. The Impact of Aerobic Exercise on the Brain
 - 3.2.2. Practical Suggestions of Aerobic Exercise for Brain Development
- 3.3. Anaerobic Exercise
 - 3.3.1. How Does Anaerobic Exercise Affect the Brain?
 - 3.3.2. Practical Proposals for the Classroom
- 3.4. Play
 - 3.4.1. Playing as an Act Connatural to the Human Being
 - 3.4.2. What Happens in the Brain While We Play?
 - 3.4.3. Playing and Learning
 - 3.4.4. Practical Proposals for the Classroom
- 3.5. Muscular Strength
 - 3.5.1. Muscular Strength and its Relationship with the Brain
 - 3.5.2. Practical Proposals for the Classroom
- 3.6. Coordination Activities
 - 3.6.1. The Role of the Cerebellum in Motor Action
 - 3.6.2. Practical Coordinative Proposals for Brain Development
- 3.7. Relaxation and Meditation Activities
 - 3.7.1. Effects of Meditative Activities on the Brain
 - 3.7.2. Practical Proposals of Relaxation and Meditation for Brain Development

- 3.8. Expressive and Artistic Activities and Brain Development from a Social-Emotional Perspective
 - 3.8.1. Effects of Expressive and Artistic Activities on the Brain
 - 3.8.2. Practical Expressive and Artistic Proposals for Brain Development
- 3.9. Natural Environment Activities and Brain Development
 - 3.9.1. The "Natural " Brain
 - 3.9.2. Effect of the Activities in the Natural Environment on the Brain
 - 3.9.3. Practical Proposals to Promote the Practice of Physical Activity in the Natural Environment
- 3.10. Global Proposals for Physical Neuroeducation
 - 3.10.1. Methodological Principles
 - 3.10.2. Proposal of Aerobic Exercise and Corporal and Artistic Expression
 - 3.10.3. Strength and Coordination Proposal
 - 3.10.4. Proposal of Activities in the Natural Environment and Meditation

Module 4. Invisible Training in Brain Development

- 4.1. Invisible Training Concept
 - 4.1.1. Invisible Training
 - 4.1.2. The Relevance of Invisible Training for Performance Enhancement
 - 4.1.3. Basic Attitudes of Everyday Life
 - 4.1.4. Sports Hygiene
 - 4.1.5. Positive Mental Disposition
 - 4.1.6. The Principle of Supercompensation
 - 4.1.7. Discipline to Promote Invisible Training
 - 4.1.8. The Role of Key Myokines in Relation to Exercise and Health
- 4.2. The Role of Main Myokines in Relation to Exercise and Health
 - 4.2.1. What are Myokines? How Important are They?
 - 4.2.2. Physical Inactivity, Inflammation and Metabolic Syndrome
 - 4.2.3. Main Myokines and Their Role
 - 4.2.4. Conclusions Myokines
- 4.3. Nutrition

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- 4.4. Relevance of Sleep in Learning
 - 4.4.1. The Functions of Sleep
 - 4.4.2. What is the Anatomical Substratum of Sleep
 - 4.4.3. What is the Role of Sleep in Learning and Memory
 - 4.4.4. Phases of Sleep and Memory Consolidation
 - 4.4.5. Sleep Favors the Insgiht or Creative Thinking
 - 4.4.6. Sleep Hygiene
 - 4.4.7. The Consequences of Not Sleeping Well
 - 4.4.8. Sleep and Harmful Substances
- 4.5. Active Breaks
 - 4.5.1. What is Active Rest?
 - 4.5.2. Difference Between Active Rest and Passive Rest
 - 4.5.3. The Importance of Active Rest for Muscle Recovery
 - 4.5.4. Maintaining the Blood Flow to Recover Earlier
 - 4.5.5. Decreasing Intensity
 - 4.5.6. Active Rest as Part of the Exercise Routine
 - 4.5.7. Ways to Practice Active Rest
 - 4.5.8. Advantages of Active Rest
- 4.6. Prevention of Harmful Habits
 - 4.6.1. Habits that Are Harmful to Health
 - 4.6.2. The Importance of Prevention
 - 4.6.3. The Development of Healthy Habits
 - 4.6.4. Physical Hygiene
 - 4.6.5. Positive Mental Attitude
 - 4.6.6. Routine Healthy Habits
 - 4.6.7. Preventing Unhealthy Habits
 - 4.6.8. Technological Allies
- 4.7. Body Posture from a Neuroscientific Perspective
 - 4.7.1. Our Body Posture
 - 4.7.2. The Brain Arranges our Body Posture
 - 4.7.3. Our Body Posture Influences the Way We Feel and Think
 - 4.7.4. Body Posture and Performance
 - 4.7.5. Tools for Proper Body Posture

- 4.8. Prevention of Diseases and Improvement of Quality of Life
 - 4.8.1. Relationship of Physical Action and Mental Health
 - 4.8.2. Physical Condition as a Factor in the Prevention of Mental Illness
 - 4.8.3. How Does Physical Fitness Improve Our Cognitive Quality?
 - 4.8.4. Programs and Tools to Prevent Mental Illness through Physical Activity
- Disease Prevention and Improvement of the Quality of Life in terms of Cardiovascular Risk Diseases (Obesity, Diabetes or Metabolic Syndrome)
 - 4.9.1. Physical Condition as a First Order Prevention Factor
 - 4.9.2. Effect of Physical Fitness on Cardiovascular Disease and the Brain
 - 4.9.3. Programs to Increase the Level of Physical Activity and Reduce the Risk of Cardiovascular Disease in Children and Adolescents
- 4.10. Prevention and Amelioration of Carcinogenic Processes due to Motor Action
 - 4.10.1. Motor Action as a Health Factor
 - 4.10.2. Physical Condition as an Element in the Prevention of Cancerous Processes
 - 4.10.3. Physical Fitness and the Improvement of Carcinogenic Processes
 - 4.10.4. Physical Fitness, the Immune System and its Effects on Health
 - 4.10.5. Programs for Physical Activity in People with Cancer Processes







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At TECH Education School we use the Case Method

In a given situation, what should a professional do? Throughout the program students will be presented with multiple simulated cases based on real situations, where they will have to investigate, establish hypotheses and, finally, resolve the situation. There is an abundance of scientific evidence on the effectiveness of the method.

With TECH, educators can experience a learning methodology that is shaking the foundations of traditional universities around the world.



It is a technique that develops critical skills and prepares educators to make decisions, defend their arguments, and contrast opinions.



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:

- Educators 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 is solidly focused on practical skills that allow educators to better integrate the knowledge into daily practice.
- **3.** Ideas and concepts are understood more efficiently, given that the example situations are based on real-life teaching.
- **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.



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Relearning Methodology

At TECH we enhance the case method with the best 100% online teaching methodology available: Relearning.

Our University is the first in the world to combine case studies with a 100% online learning system based on repetition, combining a minimum of 8 different elements in each lesson, which represent a real revolution with respect to simply studying and analyzing cases.

Educators 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 | 27 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 have trained more than 85,000 educators with unprecedented success in all specialties. All this in a highly demanding environment, where the students have a strong socio-economic profile and an average age of 43.5 years.

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 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 specialist educators 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.



Educational Techniques and Procedures on Video

TECH introduces students to the latest techniques, with the latest educational advances, and to the forefront of Education. All this, first-hand, with the maximum rigor, explained and detailed for your 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 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 suggesting that observing third-party experts can be useful.

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.







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This **Postgraduate Diploma in Neuroeducation, Motor Tasks and Brain Development** contains the most complete and up-to-date 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 Neuroeducation, Motor Tasks and Brain Development Official N° of Hours: 600 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.



Postgraduate Diploma

Neuroeducation, Motor Tasks and Brain Development

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

