



Master's Degree Clinical Neuropsychology and Neuroeducation

» Modality: online

» Duration: 12 months

» Certificate: TECH Global University

» Credits: 60 ECTS

» Schedule: at your own pace

» Exams: online

Website: www.techtitute.com/us/education/master-degree/master-clinical-neuropsychology-neuroeducation

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In recent times, neurosciences have become a revolutionary way of understanding almost all areas of the human body. Its logic is indisputable: the brain, moderator, organizer and creator holds the keys to these processes. New scientific procedures for brain exploration have opened the door to a deeper understanding of all these cognitive processes. In this context, the subject of Physical Education stands among the teaching disciplines that benefit from these advancements, taking a leap toward a new way of understanding the field. At this juncture, Neuroeducation in Physical Education becomes a powerful tool for educators.

For this reason, TECH has designed this Master's Degree, which will enable teaching professionals to acquire intensive knowledge on the foundations of neuroscience, motor practices that influence brain development, and teaching tools and strategies that promote Physical Neuroeducation. Moreover, students will explore the concept of invisible training in brain development and the benefits of physical activity in the prevention of diseases such as Alzheimer's and Parkinson's.

Therefore, professionals have an excellent opportunity to advance in their careers through university-level education delivered in a convenient, 100% online format. Students will only need a computer, tablet, or mobile device to access the entire curriculum available on the virtual platform, from anywhere and at any time. Thanks to this, they will have the flexibility to manage their study load according to their personal needs.

This Master's Degree in Clinical Neuropsychology and Neuroeducation contains the most complete and up-to-date educational program on the market. The most important features include:

- The development of practical cases presented by experts in Clinical Neuropsychology and 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 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 understand the neurocognitive and emotional processes that influence student learning"



Relearning will allow you to learn with less effort and more performance, getting more involved in your professional specialization"

The teaching staff includes professionals from the fields of Clinical Neuropsychology and Neuroeducation, who contribute their work experience to this program, alongside 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 an immersive learning experience designed to prepare for real-life situations.

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

You will identify warning signs associated with learning difficulties, neurodevelopmental disorders, or emotional disturbances.

You will design teaching strategies based on the principles of Neuroeducation and tailored to the diversity of the classroom.







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The world's best online university, according to FORBES

The prestigious Forbes magazine, specialized in business and finance, has highlighted TECH as "the best online university in the world" This is what they have recently stated in an article in their digital edition in which they echo the success story of this institution, "thanks to the academic offer it provides, the selection of its teaching staff, and an innovative learning method oriented to form the professionals of the future".

The best top international faculty

TECH's faculty is made up of more than 6,000 professors of the highest international prestige. Professors, researchers and top executives of multinational companies, including Isaiah Covington, performance coach of the Boston Celtics; Magda Romanska, principal investigator at Harvard MetaLAB; Ignacio Wistuba, chairman of the department of translational molecular pathology at MD Anderson Cancer Center; and D.W. Pine, creative director of TIME magazine, among others.

The world's largest online university

TECH is the world's largest online university. We are the largest educational institution, with the best and widest digital educational catalog, one hundred percent online and covering most areas of knowledge. We offer the largest selection of our own degrees and accredited online undergraduate and postgraduate degrees. In total, more than 14,000 university programs, in ten different languages, making us the largest educational institution in the world.



The most complete syllabus





World's
No.1
The World's largest
online university

The most complete syllabuses on the university scene

TECH offers the most complete syllabuses on the university scene, with programs that cover fundamental concepts and, at the same time, the main scientific advances in their specific scientific areas. In addition, these programs are continuously updated to guarantee students the academic vanguard and the most demanded professional skills. and the most in-demand professional competencies. In this way, the university's qualifications provide its graduates with a significant advantage to propel their careers to success.

A unique learning method

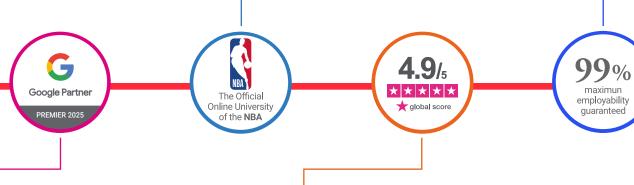
TECH is the first university to use Relearning in all its programs. This is the best online learning methodology, accredited with international teaching quality certifications, provided by prestigious educational agencies. In addition, this innovative academic model is complemented by the "Case Method", thereby configuring a unique online teaching strategy. Innovative teaching resources are also implemented, including detailed videos, infographics and interactive summaries.

The official online university of the NBA

TECH is the official online university of the NBA. Thanks to our agreement with the biggest league in basketball, we offer our students exclusive university programs, as well as a wide variety of educational resources focused on the business of the league and other areas of the sports industry. Each program is made up of a uniquely designed syllabus and features exceptional guest hosts: professionals with a distinguished sports background who will offer their expertise on the most relevant topics.

Leaders in employability

TECH has become the leading university in employability. Ninety-nine percent of its students obtain jobs in the academic field they have studied within one year of completing any of the university's programs. A similar number achieve immediate career enhancement. All this thanks to a study methodology that bases its effectiveness on the acquisition of practical skills, which are absolutely necessary for professional development.



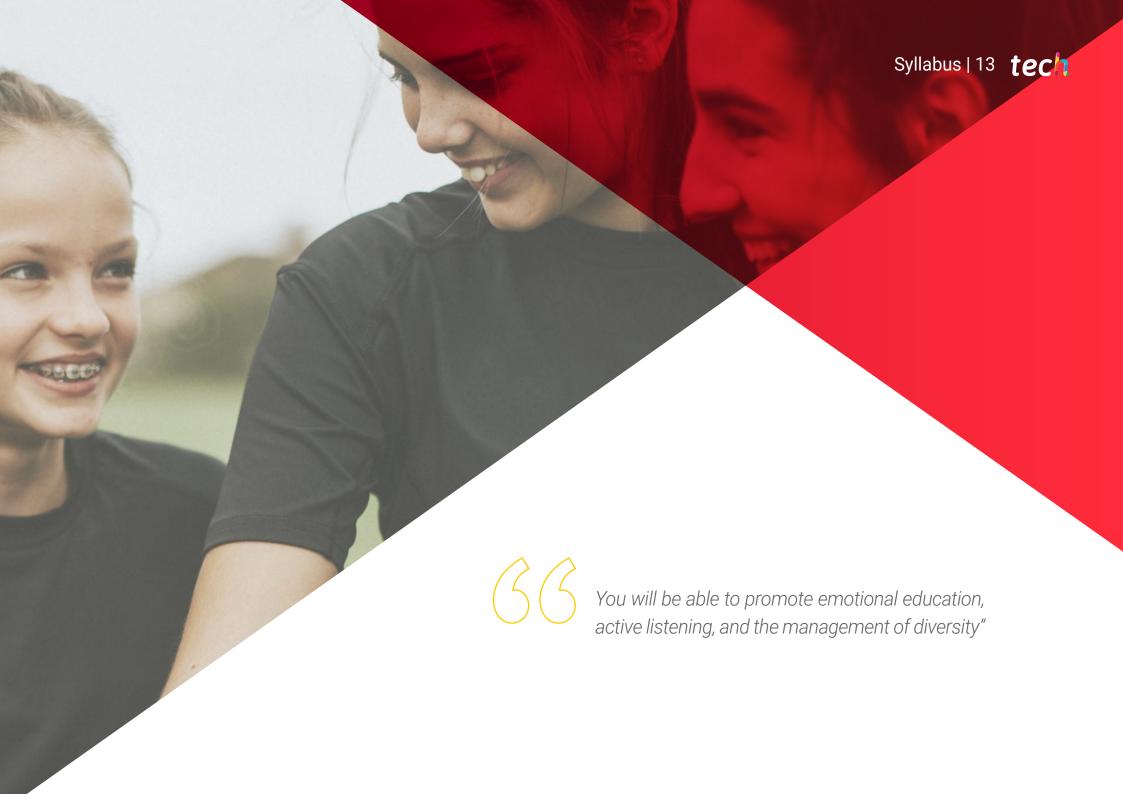
Google Premier Partner

The American technology giant has awarded TECH the Google Premier Partner badge. This award, which is only available to 3% of the world's companies, highlights the efficient, flexible and tailored experience that this university provides to students. The recognition not only accredits the maximum rigor, performance and investment in TECH's digital infrastructures, but also places this university as one of the world's leading technology companies.

The top-rated university by its students

Students have positioned TECH as the world's toprated university on the main review websites, with a highest rating of 4.9 out of 5, obtained from more than 1,000 reviews. These results consolidate TECH as the benchmark university institution at an international level, reflecting the excellence and positive impact of its educational model.





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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

- 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. Neuroeducation

- 2.1. Introduction to Neuroeducation
 - 2.1.1. Fundamentals of Psychological Processes in the Classroom
 - 2.1.2. Neuroeducation in the Classroom
- 2.2. Main Neuromyths
 - 2.2.1. Age of Learning
 - 2.2.2. The Autistic Brain

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- 2.3.1. The Brain and Attention
- 2.3.2. Attention in the Classroom
- 2.4. Emotion
 - 2.4.1. The Brain and Emotion
 - 2.4.2. Emotion in the Classroom
- 2.5. Motivation
 - 2.5.1. The Brain and Motivation
 - 2.5.2. Motivation in the Classroom
- 2.6. The Learning Process
 - 2.6.1. The Brain and Learning
 - 2.6.2. Learning in the Classroom
- 2.7. Memory
 - 2.7.1. The Brain and Memory
 - 2.7.2. Memory in the Classroom
- 2.8. Stimulation and Early Interventions
 - 2.8.1. Social Influence on Learning
 - 2.8.2. Cooperative Learning
- 2.9. Importance of Creativity in Neuroeducation
 - 2.9.1. Defining Creativity
 - 2.9.2. Creativity in the Classroom
- 2.10. Methodologies that Allow the Transformation of Education in Neuroeducation
 - 2.10.1. Traditional Methodology in Education
 - 2.10.2. New Methodology from Neuroeducation

Module 3. Impact of Emotions on Neuroeducational Processes through Motor Action

- 3.1. Concept of Emotion and Main Emotional Theories
 - 3.1.1. The Need for Emotional Development
 - 3.1.2. Concept of Emotion
 - 3.1.3. Function and Characteristics of Emotions
 - 3.1.4. The Affective Value and the Intensity of Emotion
 - 3.1.5. Theory of Emotions

3.2. Education of Emotions

- 3.2.1. The Emotional Competence Builder
- 3.2.2. The GROP Competency Model
- 3.2.3. Emotional Maturity
- 3.3. Emotional Intelligence
 - 3.3.1. The Concept of Emotional Intelligence
 - 3.3.2. The Model of Mayer and Salovey
 - 3.3.3. The Social-Emotional Model of Bar-On
 - 3.3.4. Goleman's Competency Model
- 3.4. The Role of Emotion in the Body and Motor Action
 - 3.4.1. The Learning Process
 - 3.4.2. Emotion in Learning Processes
 - 3.4.3. Emotions in Motor Action
- 3.5. The Emotional Brain
 - 3.5.1. The Emotional Brain or Limbic System
 - 3.5.2. The Socio-Emotional Brain
- 3.6. Emotional Processing in Brain Structures
 - 3.6.1. The Main Brain Structures Involved in Emotional Processes
 - 3.6.2. Emotional Intensity and Emotional Appraisal in the Brain Structures
 - 3.6.3. Particular Emotional Brains
- 3.7. The Amygdala and Emotional Processes
 - 3.7.1. The Role of the Amygdala in Emotions
 - 3.7.2. The Conditioned Emotional Response
 - 3.7.3. Self-Control and Attention
 - 3.7.4. Self-Regulation and Exercise
- 8.8. Positive Emotions and the Brain's Reward System
 - 3.8.1. Classifications of Salient Emotions
 - 3.8.2. The Ability to Self-Generate Positive Emotions
 - 3.8.3. The Functioning of the Brain's Reward System

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- 3.9. Emotional Chemistry in Response to Motor Action
 - 3.9.1. From Emotion to Action
 - 3.9.2. The Neurochemistry of Emotion
 - 3.9.3. Neurochemistry in Motor Action
 - 3.9.4. Epigenetics and Exercise
- 3.10. Emotional Health through Motor Action
 - 3.10.1. Psychoneuroimmunology
 - 3.10.2. Positive Emotions and Health
 - 3.10.3. Emotional Health from the Body

Module 4. The Social Brain in Motor Action from a Neuroscientific Perspective

- 4.1. The Human Being: A Social Being
 - 4.1.1. The Social Nature of the Human Being
 - 4.1.2. Evolution of Human Social Capabilities
 - 4.1.3. Why We Live in Society
 - 4.1.4. The Individual as Part of the Social Group
 - 4.1.5. Social Development: Socialization
 - 4.1.6. The Social and Affective Needs of the Human Being
 - 4.1.7. The Consequences of Social Deprivation
 - 4.1.8. The Development of Identity in Society
 - 4.1.9. Human Societies and Social Groups: Coexistence and Conflicts
- 4.2. The Social Brain
 - 4.2.1. A Brain Prepared for the Social
 - 4.2.2. How Does the Social Brain Work?
 - 4.2.3. The Autonomic Nervous System
 - 4.2.4. Oxytocin: An Essential Neurochemical Mediator
 - 4.2.5. The Antisocial Capacity: Serotonin and MAO Enzyme
 - 4.2.6. The Dorsal Vagus Nucleus: Responsible for Playful and Welcoming Social Interaction
 - 4.2.7. Face Perception



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- 4.3.1. The Discovery of Mirror Neurons
- 4.3.2. How do Mirror Neurons Work?
- 4.3.3. Social Empathy and Mirror Neurons
- 4.3.4. Identification with Others
- 4.3.5. Theory of Mind. Representing the Mind of Others
- 4.3.6. The Educational and Therapeutic Implication of Mirror Neurons

4.4. The Complex Social Functions

- 4.4.1. Social Functions
- 4.4.2. Executive Functions
- 4.4.3. Self-Control Function
- 4.4.4. Social Emotions
- 4.4.5. Altruism and Prosocial Behavior
- 4.4.6. Conflict, Aggression and Violence
- 4.4.7. Social Relations
- 4.4.8. Prejudice and Stereotypes
- 4.4.9. Coexistence

4.5. Integrative Health from a Social Competence Perspective

- 4.5.1. What is Integrative Health?
- 4.5.2. Health and Social Competence as a Component of Integrative Health
- 4.5.3. Adaptive Behaviors that Make Up Social Competence
- 4.5.4. Maladaptive Behaviors
- 4.5.5. The Effect of the Absence of Social Competence on Health
- 4.5.6. How to Promote the Development of Social Competence

4.6. Role of Motor Action in the Development of Social Health

- 4.6.1. What is Meant by Social Health?
- 4.6.2. Why is Social Health important?
- 4.6.3. The Body as an Element of Social and Emotional Health
- 4.6.4. The Motor Action and the Development of Health
- 4.6.5. Promotion of the Social Health through the Motor Action
- 4.6.6. Tools to Promote Motor Action and Social Health Development

4.7. Social Relationship in Personal Well-Being

- 4.7.1. Social Interactions
- 4.7.2. Why do Human Beings Need Relationships?
- 4.7.3. Social Relationships and Individual Needs
- 4.7.4. The Power of Healthy and Satisfactory Relationships
- 4.7.5. The Social Role
- 4.7.6. The Social Relationship and Well-Being
- 4.7.7. Lack of Relationships and Their Consequences
- 4.7.8. Social Isolation

4.8. Mental Health and Interpersonal Relationships

- 4.8.1. Interpersonal Relationships and Their Role
- 4.8.2. Affective Needs
- 4.8.3. Social Expectations and Beliefs
- 4.8.4. The Role of Stereotypes and our Mental Health
- 4.8.5. The Importance of Social Support for Mental Health (Perceived and Real)
- 4.8.6. Interpersonal Relationships as a Basis for Well-Being
- 4.8.7. The Quality of Interpersonal Relationships
- 4.8.8. The Consequences on Mental Health of the Lack of Relationships

4.9. Relevance of Cooperation from a Neuroeducational Perspective

- 4.9.1. What is Cooperation
- 4.9.2. The Brain that Learns in a Group
- 4.9.3. The Role of Cooperation for Development
- 4.9.4. Oxytocin, the Chemical Element of Cooperation
- 4.9.5. Reward Processes and Cooperation
- 4.9.6. Why is Cooperation Important?

4.10. Climate in Learning Environments

- 4.10.1. Social climate
- 4.10.2. Positive and Negative Climates
- 4.10.3. Factors that Determine the Type of Climate
- 4.10.4. The Influence of Climate on the Learning Environment
- 4.10.5. Elements of a Climate that Favors the Learning Environment
- 4.10.6. Recognizing Climates in Learning Environments
- 4.10.7. The Role of the Teacher as a Promoter of a Favorable Climate
- 4.10.8. Tools to Create Positive and Favorable Climates

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Module 5. Impact of Motor Action on Brain Learning Processes and on Health Development

- 5.1. Impact of Motor Action on Learning Processes
 - 5.1.1. Concepts Related to Motor Action and Learning
 - 5.1.2. Motor Learning: Phases and Factors
 - 5.1.3. The Information Processing Model: Perception, Decision, Execution, Movement Control and Feedback
 - 5.1.4. Benefits of Motor Action on Brain Learning Processes
- 5.2. Motor Action and Neutrophilic Factors. BDNF (Brain-Derived Neurotrophic Factor)
 - 5.2.1. Neurogenesis and Neuroplasticity
 - 5.2.2. Neurotrophins or Neurotrophic Factors. What are They and What are They For?
 - 5.2.3. Key Role and Benefits of Motor Action on BDNF
- 5.3. Motor Action, Neurotransmitters and Hormones
 - 5.3.1. The Main Neurotransmitters and Hormones Related to Motor Practice and Learning Abilities
 - 5.3.2. Endorphins
 - 5.3.3. Serotonin
 - 5.3.4. Oxytocin
 - 5.3.5. Dopamine
 - 5.3.6. Adrenaline and Noradrenaline
 - 5.3.7. Glucocorticoids
- 5.4. The Importance of the Cerebellum in Coordination and Cognitive Processes
 - 5.4.1. Structure of the Cerebellum
 - 5.4.2. Functions of the Cerebellum and its Importance in Motor Action
 - 5.4.3. Importance of the Cerebellum in Cognitive Processes
- 5.5. Impact of Motor Action on Memory Processes
 - 5.5.1. What is Memory and How is it Divided?
 - 5.5.2. In What Part of the Brain is Memory Located?
 - 5.5.3. Prominent Role of the Hippocampus in Memory
 - 5.5.4. Impact of Motor Action on Memory

- 5.6. The Prefrontal Cortex, Seat of the Brain's Executive Functions
 - 5.6.1. Executive Functions of the Brain
 - 5.6.2. The Four Lobes of Each Cerebral Hemisphere
 - 5.6.3. Frontal Lobe: Executive Director of the Brain
 - 5.6.4. The Prefrontal Cortex: The Orchestra Conductor
 - 5.6.5. Cerebral Structures Connected to the Frontal Lobe
- 5.7. Impact of Motor Action with Executive Processes: Decision-Making
 - 5.7.1. Somatic Markers
 - 5.7.2. Brain Structures Involved in Decision Making
 - 5.7.3. The Development of Somatic States
 - 5.7.4. Decision-Making in Sports Practice
- 5.8. Impact of Motor Action with Executive Processes: Pause and Reflection Response
 - 5.8.1. Regulating Emotions
 - 5.8.2. Conflicts, Inconsistencies and the Prefrontal Cortex
 - 5.8.3. The Relevance of Heart Rate
- 5.9. Motor Action and Predisposition to Learning
 - 5.9.1. Motor Action and Learning
 - 5.9.2. How Does Motor Action Predispose to Learning?
 - 5.9.3. How Can the Benefits of Motor Action be Enhanced?
- 5.10. Impact of Motor Action on Neuroprotective Processes
 - 5.10.1. Conceptualization of Neuroprotection
 - 5.10.2. Effects of Exercise on Brain Protection

Module 6. Physical Neuroeducation and Learning

- 6.1. Body- Brain Language and Embodied Cognition
 - 6.1.1. Conceptualization of Embodied Cognition
 - 5.1.2. Intelligent Behavior Based on Body-Brain-Environment Interaction
- 6.2. Mental Health and Exercise
 - 6.2.1. What is Meant by Mental Health in this Context?
 - 6.2.2. The Evolutionary Purpose of Motor Action
 - 6.2.3. What if Movement Improved Brain Functioning?

- 6.3. Brain Development Through Physical Exercise
 - 6.3.1. Hippocampus and Basal Ganglia in Relation to Exercise
 - 6.3.2. The Development of the Prefrontal Cortex and Other Brain Structures due to Physical Exercise
- 6.4. Executive Attention and Exercise
 - 6.4.1. The Cognitive Function of Attention
 - 6.4.2. Relationship Between Attention and Exercise
 - 6.4.3. Enhancing Attention
- 6.5. Working Memory in Motor Action
 - 6.5.1. The Cognitive Function of Memory
 - 6.5.2. Working Memory
 - 6.5.3. Relationship Between Memory and Motor Action
 - 6.5.4. Enhancing Memory
- 6.6. Improvement of Cognitive Performance derived from Motor Action
 - 6.6.1. Motor Action-Behavior Relationship
 - 6.6.2. Motor Action-Brain Health Relationship
- 6.7. Academic Results and their Relationship to Physical Practice
 - 6.7.1. Academic Improvements as a Consequence of Motor Action
 - 6.7.2. Specific Interventions
 - 6.7.3. Prolonged Interventions
 - 6.7.4. Conclusions
- 6.8. Positive Influence of Motor Skills on Students with Learning Difficulties
 - 6.8.1. The Brain in Special Educational Needs
 - 6.8.2. Attention Deficit Hyperactivity Disorder and Motor Action
 - 6.8.3. Specific Proposals for Motor Action
- 6.9. Pleasure, a Fundamental Element in Physical Neuroeducation
 - 6.9.1. Pleasure Systems in the Brain
 - 6.9.2. Relationship Between Pleasure and Learning
- $\hbox{6.10. General Recommendations for the Implementation of Teaching Proposals }$
 - 6.10.1. The Coherence of Action-Research
 - 6.10.2. Concrete Example of an Action-Research Proposal in Physical Neuroeducation
 - 6.10.3. Phases of the Working Process
 - 6.10.4. Criteria, Techniques and Strategies for the Collection of Information
 - 6.10.5. Approximate Schedule of the Planned Phases

Module 7. Motor Practices Affecting Brain Development

- 7.1. Body Wisdom
 - 7.1.1. The Body as a Starting Point
 - 7.1.2. The Languages of the Body
 - 7.1.3. Body Intelligence
- 7.2. Aerobic Exercise
 - 7.2.1. The Impact of Aerobic Exercise on the Brain
 - 7.2.2. Practical Suggestions of Aerobic Exercise for Brain Development
- 7.3. Anaerobic Exercise
 - 7.3.1. How Does Anaerobic Exercise Affect the Brain?
 - 7.3.2. Practical Proposals for the Classroom
- 7.4. The Game
 - 7.4.1. Playing as an Act Connatural to the Human Being
 - 7.4.2. What Happens in the Brain While We Play?
 - 7.4.3. Playing and Learning
 - 7.4.4. Practical Proposals for the Classroom
- 7.5. Muscular Strength
 - 7.5.1. Muscular Strength and its Relationship with the Brain
 - 7.5.2. Practical Proposals for the Classroom
- 7.6. Coordination Activities
 - 7.6.1. The Role of the Cerebellum in Motor Action
 - 7.6.2. Practical Coordinative Proposals for Brain Development
- 7.7. Relaxation and Meditation Activities
 - 7.7.1. Effects of Meditative Activities on the Brain
 - 7.7.2. Practical Proposals of Relaxation and Meditation for Brain Development
- 7.8. Expressive and Artistic Activities and Brain Development from a Social-Emotional Perspective
 - 7.8.1. Effects of Expressive and Artistic Activities on the Brain
 - 7.8.2. Practical Expressive and Artistic Proposals for Brain Development
- 7.9. Natural Environment Activities and Brain Development
 - 7 9 1 The "Natural " Brain
 - 7.9.2. Effect of the Activities in the Natural Environment on the Brain
 - 7.9.3. Practical Proposals to Promote the Practice of Physical Activity in the Natural Environment

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- 7.10. Global Proposals for Physical Neuroeducation
 - 7.10.1. Methodological Principles
 - 7.10.2. Proposal of Aerobic Exercise and Corporal and Artistic Expression
 - 7.10.3. Strength and Coordination Proposal
 - 7.10.4. Proposal of Activities in the Natural Environment and Meditation

Module 8. Invisible Training in Brain Development

- 8.1. Invisible Training Concept
 - 8.1.1. The Invisible Training
 - 8.1.2. The Relevance of Invisible Training for Performance Enhancement
 - 8.1.3. Basic Attitudes of Everyday Life
 - 8.1.4. Sports Hygiene
 - 8.1.5. Positive Mental Disposition
 - 8.1.6. The Principle of Supercompensation
 - 8.1.7. Key Factors of Invisible Training
 - 8.1.8. The Role of Key Myokines in Relation to Exercise and Health
- 8.2. The Role of Main Myokines in Relation to Exercise and Health
 - 8.2.1. What are Myokines? How Important are They?
 - 8.2.2. Physical Inactivity, Inflammation and Metabolic Syndrome
 - 8.2.3. Main Myokines and Their Role
 - 8.2.4. Conclusions on Myokines
- 8.3. Nutrition
- 8.4. Relevance of Sleep in Learning
 - 8.4.1. The Functions of Sleep
 - 8.4.2. What is the Anatomical Substratum of Sleep
 - 8.4.3. What is the Role of Sleep in Learning and Memory
 - 8.4.4. Phases of Sleep and Memory Consolidation
 - 8.4.5. Sleep Favors Insight or Creative Thinking
 - 8.4.6. Sleep Hygiene
 - 8.4.7. The Consequences of Poor Sleep
 - 8.4.8. Sleep and Harmful Substances

- 8.5. Active Breaks
 - 8.5.1. What is Active Rest?
 - 8.5.2. Difference Between Active Rest and Passive Rest
 - 8.5.3. The Importance of Active Rest for Muscle Recovery
 - 8.5.4. Maintaining the Blood Flow to Recover Earlier
 - 8.5.5. Decreasing Intensity
 - 8.5.6. Active Rest as Part of the Exercise Routine
 - 8.5.7. Ways to Practice Active Rest
 - 8.5.8. Advantages of Active Rest
- 8.6. Prevention of Harmful Habits
 - 8.6.1. Habits that Are Harmful to Health
 - 8.6.2. The Importance of Prevention
 - 8.6.3. The Development of Healthy Habits
 - 8.6.4. Physical Hygiene
 - 8.6.5. Positive Mental Attitude
 - 8.6.6. Routine Healthy Habits
 - 8.6.7. Preventing Unhealthy Habits
 - 8.6.8. Technological Allies
- 8.7. Body Posture from a Neuroscientific Perspective
 - 8.7.1. Our Body Posture
 - 8.7.2. The Brain Arranges our Body Posture
 - 8.7.3. Our Body Posture Influences the Way We Feel and Think
 - 8.7.4. Body Posture and Performance
 - 8.7.5. Tools for Proper Body Posture
- 8.8. Prevention of Diseases and Improvement of Quality of Life
 - 8.8.1. Relationship of Physical Action and Mental Health
 - 8.8.2. Physical Condition as a Factor in the Prevention of Mental Illness
 - 8.8.3. How Does Physical Fitness Improve Our Cognitive Quality?
 - 8.8.4. Programs and Tools to Prevent Mental Illness through Physical Activity

Syllabus | 21 tech

- 8.9. Disease Prevention and Improvement of the Quality of Life in terms of Cardiovascular Risk Diseases (Obesity, Diabetes or Metabolic Syndrome)
 - 8.9.1. Physical Condition as a First Order Prevention Factor
 - 8.9.2. Effect of Physical Fitness on Cardiovascular Disease and the Brain
 - 8.9.3. Programs to Increase the Level of Physical Activity and Reduce the Risk of Cardiovascular Disease in Children and Adolescents
- 8.10. Prevention and Amelioration of Carcinogenic Processes due to Motor Action
 - 8.10.1. Motor Action as a Health Factor
 - 8.10.2. Physical Condition as an Element in the Prevention of Cancerous Processes
 - 8.10.3. Physical Fitness and the Improvement of Carcinogenic Processes
 - 8.10.4. Physical Fitness, the Immune System and its Effects on Health
 - 8.10.5. Programs for Physical Activity in People with Cancer Processes

Module 9. Pedagogical Models and Assessment in Neurophysical Education

- 9.1. Conceptual Approach to Terms Related to Methodology in Physical Education
 - 9.1.1. Teaching and Learning
 - 9.1.2. Didactic Intervention
 - 9.1.3. Teaching Technique and Style
 - 9.1.4. Teaching-Learning Based on Direct Instruction
 - 9.1.5. Teaching-Learning Based on Inquiry or Searching
 - 9.1.6. Strategy in Practice
 - 9.1.7. Pedagogical Methods and Models
- 9.2. Assessment of the Teaching-Learning Process in Physical Neuroeducation
 - 9.2.1. Conceptual Clarification of the Terms Related to the Assessment
 - 9.2.2. Assessment Techniques, Procedures and Instruments
 - 9.2.3. Types of Assessment in Physical Education
 - 9.2.4. Moments of Physical Education Assessment
 - 9.2.5. The Evaluation-Research Binomial
 - 9.2.6. Neuroevaluation in Physical Education

- 9.3. Assessment of Student Learning Focused on Neurophysical Education
 - 9.3.1. Competency-Based Assessment
 - 9.3.2. Formative Assessment
 - 9.3.3. Personalized Assessment
 - 9.3.4. Practical Proposals for Assessment in Physical Education from a Neurodidactic Perspective
- 9.4. Cooperative Learning
 - 9.4.1. Description of the Model
 - 9.4.2. Practical Proposals
 - 9.4.3. Recommendations for Implementation
- 9.5. Sports Education Model (SEM)
 - 9.5.1. Description of the Model
 - 9.5.2. Practical Proposals
 - 9.5.3. Recommendations for Implementation
- 9.6. Personal and Social Responsibility Model
 - 9.6.1. Description of the Model
 - 9.6.2. Practical Proposals
 - 9.6.3. Recommendations for Implementation
- 9.7. Comprehensive Sport Initiation Model (TGfU)
 - 9.7.1. Description of the Model
 - 9.7.2. Practical Proposals
 - 9.7.3. Recommendations for Implementation
- 9.8. Ludotechnical Model
 - 9.8.1. Description of the Model
 - 9.8.2. Practical Proposals
 - 9.8.3. Recommendations for Implementation
- 9.9. Adventure Education Model
 - 9.9.1. Description of the Model
 - 9.9.2. Practical Proposals
 - 9.9.3. Recommendations for Implementation

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- 9.10.1. Motor Literacy
- 9.10.2. Attitudinal Model
- 9.10.3. Self-Construction of Materials
- 9.10.4. Health Education
- 9.10.5. Hybridizing Models

Module 10. Methodologies, Methods, Tools, and Teaching Strategies that Promote Neurophysical Education

- 10.1. Flipped Classroom or Inverted Classroom
 - 10.1.1. Description
 - 10.1.2. Practical Proposals
 - 10.1.3. Recommendations for Implementation
- 10.2. Problem-Based and Challenge-Based Learning
 - 10.2.1. Description
 - 10.2.2. Practical Proposals
 - 10.2.3. Recommendations for Implementation
- 10.3. Project-Based Learning
 - 10.3.1. Description
 - 10.3.2. Practical Proposals
 - 10.3.3. Recommendations for Implementation
- 10.4. Case Method and Service Learning
- 10.5. Learning Environments
 - 10.5.1. Description
 - 10.5.2. Practical Proposals
 - 10.5.3. Recommendations for Implementation
- 10.6. Motor Creativity or Corporal Synectics
 - 10.6.1. Description
 - 10.6.2. Practical Proposals
 - 10.6.3. Recommendations for Implementation
- 10.7. Game-Based Learning
 - 10.7.1. Description
 - 10.7.2. Practical Proposals
 - 10.7.3. Recommendations for Implementation





Syllabus | 23 tech

- 10.8. Ludification or Gamification
 - 10.8.1. Description
 - 10.8.2. Practical Proposals
 - 10.8.3. Recommendations for Implementation
- 10.9. Other Methods, Tools, and Didactic Strategies Promoting Physical Neuroeducation
 - 10.9.1. Case Method
 - 10.9.2. Didactic Contract
 - 10.9.3. Corner Work
 - 10.9.4. Aronson's Puzzle
 - 10.9.5. Interactive Methodology
 - 10.9.6. Technologies for Learning and Knowledge (TLK)
 - 10.9.7. Portfolio
- 10.10. Methodological Guidelines for the Design of Physical Neuroeducation Programs
 - 10.10.1. Methodological Guidelines According to Neurophysical Education
 - 10.10.2. Recommendations for Designing Programs, Teaching Units, and Sessions Based on Neurophysical Education
 - 10.10.3. Examples of Units and Sessions Based on Neurophysical Education



Boost your professional development with a program that will guide you in the design of programs and sessions based on Physical Neuroeducation"





tech 26 | Teaching Objectives



General Objectives

- 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 skills as Neuroeducation professionals in the field of Motor Action



Become a leader in the integration of neuroscience, motor skills, and education to transform your students' learning experience"





Module 1. Basis of Neurosciences

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

Module 2. Neuroeducation

- Define the principles of Neuroeducation
- Explain strategies for early stimulation and interventions

Module 3. Impact of Emotions on Neuroeducational Processes through Motor Action

- Describe the emotional process from a neuroscientific perspective
- Delve into the emotional chemistry in response to motor action

Module 4. The Social Brain in Motor Action from a Neuroscientific Perspective

- Describe the role of motor action in the development of social health
- Define the relevance of cooperation from a neuroeducational perspective

Module 5. Impact of Motor Action on Brain Learning Processes and on Health Development

- Address the main neurotransmitters and hormones related to motor activity and learning ability
- Apply strategies for the prevention of diseases and the improvement of quality of life concerning cardiovascular or other risk-related diseases

Module 6. Physical Neuroeducation and Learning

- Delve into the the relevance of body-brain language along with embodied cognition
- Know the positive influence of motor skills in students with learning difficulties

Module 7. Motor Practices Affecting Brain Development

- Know the importance of expressive and artistic activities and brain development from a social and emotional perspective
- · Identify outdoor activities and brain development

Module 8. 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

Module 9. Pedagogical Models and Assessment in Neurophysical Education

- Carry out an assessment of the teaching-learning process in Physical Neuroeducation
- Learn about cooperative learning models and apply them in the sports field

Module 10. Methodologies, Methods, Tools, and Teaching Strategies that Promote Neurophysical Education

- Learn about new teaching methodologies through the Flipped Classroom
- Use gamification and ludification strategies to promote children's neurophysical learning





tech 30 | Career Opportunities

Graduate Profile

Graduates of this program will be highly trained professionals, capable of understanding the neurocognitive processes related to learning and motor action. Thus, they will be able to design and implement neuroscience-based strategies to optimize teaching, promote emotional well-being, and prevent learning difficulties. Additionally, they will be prepared to apply innovative teaching tools that integrate Physical Neuroeducation, promoting cognitive and emotional development in various educational contexts.

You will coordinate school mediation teams, fostering a culture of peace within the educational center.

- Application of Neuroscience in Learning: Ability to integrate advances in neuroscience into education and motor development
- **Design of Neuroeducational Interventions:** Skill in creating teaching programs and pedagogical strategies that stimulate learning based on motor action
- Optimization of the Learning Environment: Implementation of methodologies that foster an emotionally safe and cognitively stimulating environment
- **Prevention of Diseases and Overall Well-being:** Knowledge of the relationship between physical exercise, mental health, and the prevention of neurodegenerative diseases





Career Opportunities | 31 tech

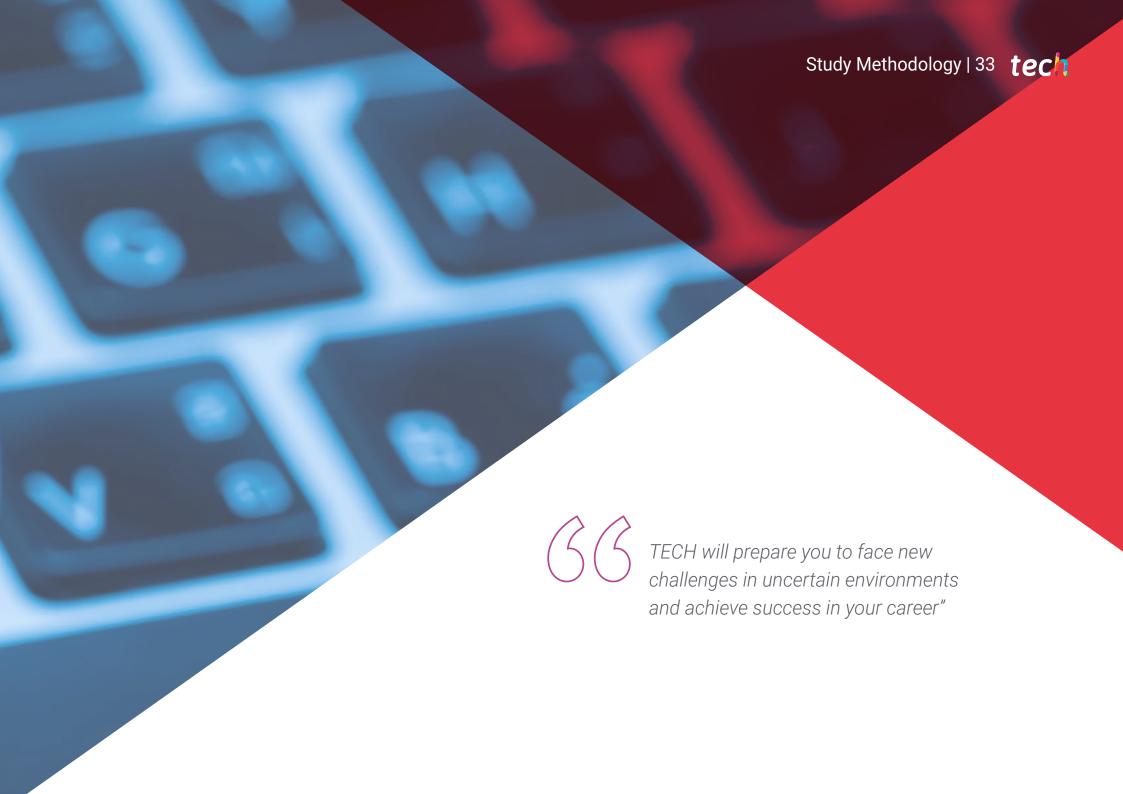
After completing the university program, you will be able to apply your knowledge and skills in the following positions:

- **1. Neuroscience and Education Researcher:** You will design and lead research projects on the relationship between the brain, learning, and motor development.
- 2. Advisor on Neuroeducational Teaching Methodologies: You will collaborate with educational institutions to apply neuroscience-based strategies to improve teaching and learning processes.
- **3. Consultant on Cognitive and Motor Stimulation Programs:** You will design programs to enhance memory, attention, and academic performance across various population groups.
- **4. Coordinator of Health and Well-being Projects:** You will lead programs for the prevention and promotion of mental health through physical exercise and neuroscience.
- **5. Neuroeducational Learning Environment Technician:** You will create educational settings that promote brain plasticity and sensory stimulation in the classroom.



You will implement the most up-to-date neuroscientific approaches in your pedagogical practice, designing teaching strategies that foster students' brain development"



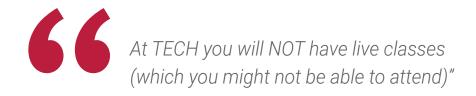


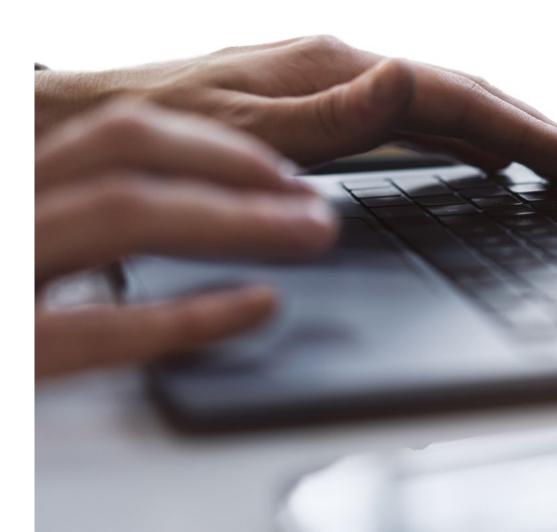
The student: the priority of all TECH programs

In TECH's study methodology, the student is the main protagonist.

The teaching tools of each program have been selected taking into account the demands of time, availability and academic rigor that, today, not only students demand but also the most competitive positions in the market.

With TECH's asynchronous educational model, it is students who choose the time they dedicate to study, how they decide to establish their routines, and all this from the comfort of the electronic device of their choice. The student will not have to participate in live classes, which in many cases they will not be able to attend. The learning activities will be done when it is convenient for them. They can always decide when and from where they want to study.







The most comprehensive study plans at the international level

TECH is distinguished by offering the most complete academic itineraries on the university scene. This comprehensiveness is achieved through the creation of syllabi that not only cover the essential knowledge, but also the most recent innovations in each area.

By being constantly up to date, these programs allow students to keep up with market changes and acquire the skills most valued by employers. In this way, those who complete their studies at TECH receive a comprehensive education that provides them with a notable competitive advantage to further their careers.

And what's more, they will be able to do so from any device, pc, tablet or smartphone.



TECH's model is asynchronous, so it allows you to study with your pc, tablet or your smartphone wherever you want, whenever you want and for as long as you want"

tech 36 | Study Methodology

Case Studies and Case Method

The case method has been the learning system most used by the world's best business schools. Developed in 1912 so that law students would not only learn the law based on theoretical content, its function was also to present them with real complex situations. In this way, they could make informed decisions and value judgments about how to resolve them. In 1924, Harvard adopted it as a standard teaching method.

With this teaching model, it is students themselves who build their professional competence through strategies such as Learning by Doing or Design Thinking, used by other renowned institutions such as Yale or Stanford.

This action-oriented method will be applied throughout the entire academic itinerary that the student undertakes with TECH. Students will be confronted with multiple real-life situations and will have to integrate knowledge, research, discuss and defend their ideas and decisions. All this with the premise of answering the question of how they would act when facing specific events of complexity in their daily work.



Relearning Methodology

At TECH, case studies are enhanced with the best 100% online teaching method: Relearning.

This method breaks with traditional teaching techniques to put the student at the center of the equation, providing the best content in different formats. In this way, it manages to review and reiterate the key concepts of each subject and learn to apply them in a real context.

In the same line, and according to multiple scientific researches, reiteration is the best way to learn. For this reason, TECH offers between 8 and 16 repetitions of each key concept within the same lesson, presented in a different way, with the objective of ensuring that the knowledge is completely consolidated during the study process.

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.



tech 38 | Study Methodology

A 100% online Virtual Campus with the best teaching resources

In order to apply its methodology effectively, TECH focuses on providing graduates with teaching materials in different formats: texts, interactive videos, illustrations and knowledge maps, among others. All of them are designed by qualified teachers who focus their work on combining real cases with the resolution of complex situations through simulation, the study of contexts applied to each professional career and learning based on repetition, through audios, presentations, animations, images, etc.

The latest scientific evidence in the field of Neuroscience points to the importance of taking into account the place and context where the content is accessed before starting a new learning process. Being able to adjust these variables in a personalized way helps people to remember and store knowledge in the hippocampus to retain it in the long term. This is a model called Neurocognitive context-dependent e-learning that is consciously applied in this university qualification.

In order to facilitate tutor-student contact as much as possible, you will have a wide range of communication possibilities, both in real time and delayed (internal messaging, telephone answering service, email contact with the technical secretary, chat and videoconferences).

Likewise, this very complete Virtual Campus will allow TECH students to organize their study schedules according to their personal availability or work obligations. In this way, they will have global control of the academic content and teaching tools, based on their fast-paced professional update.



The online study mode of this program will allow you to organize your time and learning pace, adapting it to your schedule"

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 assess 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.

The university methodology top-rated by its students

The results of this innovative teaching model can be seen in the overall satisfaction levels of TECH graduates.

The students' assessment of the teaching quality, the quality of the materials, the structure of the program and its objectives is excellent. Not surprisingly, the institution became the top-rated university by its students according to the global score index, obtaining a 4.9 out of 5.

Access the study contents from any device with an Internet connection (computer, tablet, smartphone) thanks to the fact that TECH is at the forefront of technology and teaching.

You will be able to learn with the advantages that come with having access to simulated learning environments and the learning by observation approach, that is, Learning from an expert.

tech 40 | Study Methodology

As such, the best educational materials, thoroughly prepared, will be available in this program:



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.

This content is then adapted in an audiovisual format that will create our way of working online, with the latest techniques that allow us to offer you high quality in all of the material that we provide you with.



Practicing Skills and Abilities

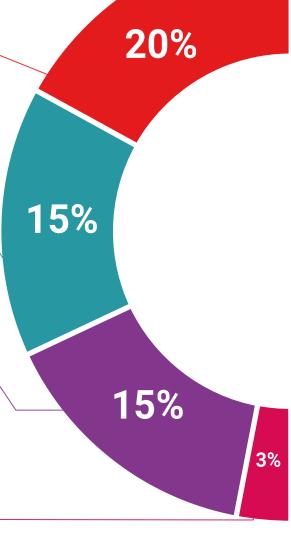
You will carry out activities to develop specific competencies and skills in each thematic field. Exercises and activities to acquire and develop the skills and abilities that a specialist needs to develop within the framework of the globalization we live in.



Interactive Summaries

We present 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, international guides... In our virtual library you will have access to everything you need to complete your education.

Study Methodology | 41 tech

Case Studies

Students will complete a selection of the best case studies in the field. Cases that are presented, analyzed, and supervised by the best specialists in the world.



Testing & Retesting

We periodically assess and re-assess your knowledge throughout the program. We do this on 3 of the 4 levels of Miller's Pyramid.



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 for 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.



7%





tech 44 | Teaching Staff

Management



Ms. Pellicer Royo, Irene

- Expert in Emotional Education at the Jesuitas-Caspe School, Barcelona
- Master's Degree in Medical Sciences Applied to Physical Activity and Sport by the University of Barcelona
- Master's Degree in Emotional Education and Well-being from the University of Barcelona
- Bachelor's Degree in Physical Activity and Sport Sciences at the University of Lérida

Teachers

Dr. De la Serna, Juan Moisés

- Independent Psychologist and expert writer in Neurosciences
- Writer specialized in Psychology and Neurosciences
- Author of the Open Chair of Psychology and Neurosciences
- Scientific Disseminator
- Doctorate in Psychology
- Bachelor's Degree in Psychology. University of Seville
- Master's Degree in Neurosciences and Behavioral Biology Pablo de Olavide University, Seville
- Expert in Teaching Methodology. La Salle University
- University Specialist in Clinical Hypnosis, Hypnotherapy National University of Distance Education - UNED
- Diploma in Social Graduate, Human Resources Management, Personnel Administration. University of Seville
- Expert in Project Management, Administration and Business Management. Federation of Services U.G.T.
- Trainer of Trainers. Official College of Psychologists of Andalusia

Ms. Rodríguez Ruiz, Celia

- Clinical Psychologist at EVEL Center
- Psychopedagogical Area Manager at Atenea Study Center
- Pedagogical Advisor at Cuadernos Rubio
- Editor of Hacer Familia Magazine
- Editor of Webconsultas Healthcare Medical Team

- Collaborator at the Eduardo Punset Foundation
- Bachelor's Degree in Psychology from the UNED
- Bachelor's Degree in Pedagogies from the Complutense University Madrid
- Specialist in Cognitive Behavioral Therapy in Childhood and Adolescence from the UNED
- Specialist in Clinical Psychology and Child Psychotherapy by INUPSI
- Trained in Emotional Intelligence, Neuropsychology, Dyslexia, ADHD, Positive Emotions, and Communication

Dr. Navarro Ardoy, Daniel

- Principal CEO at Teacher MBA
- PROFITH (PROmoting FITness and Health) Research Group
- SAFE Research Group
- EFFECTS 262 Research Group
- Physical Education Teacher
- PhD in Physical Education Applied to Health by the Physical Activity and Health Program of the University of Granada
- PhD in Physical Education Applied to Health with research stay at Karolinska Institutet in Stockholm
- Degree in Physical Activity and Sport Sciences from the University of Granada





tech 48 | Certificate

This private qualification will allow you to obtain a **Master's Degree in Clinical Neuropsychology and Neuroeducation** endorsed by **TECH Global University**, the world's largest online university.

TECH Global University is an official European University publicly recognized by the Government of Andorra (*official bulletin*). Andorra is part of the European Higher Education Area (EHEA) since 2003. The EHEA is an initiative promoted by the European Union that aims to organize the international training framework and harmonize the higher education systems of the member countries of this space. The project promotes common values, the implementation of collaborative tools and strengthening its quality assurance mechanisms to enhance collaboration and mobility among students, researchers and academics.

This **TECH Global University** private qualification is a European program of continuing education and professional updating that guarantees the acquisition of competencies in its area of knowledge, providing a high curricular value to the student who completes the program.

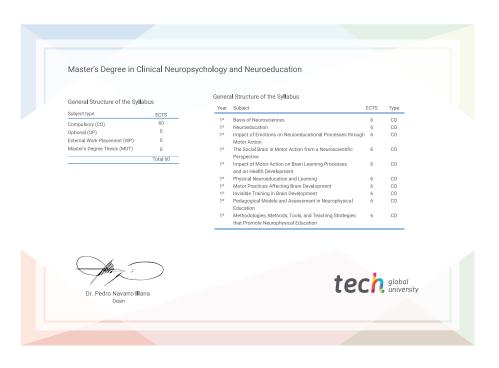
Title: Master's Degree in Clinical Neuropsychology and Neuroeducation

Modality: online

Duration: 12 months

Accreditation: 60 ECTS





^{*}Apostille Convention. In the event that the student wishes to have their paper diploma issued with an apostille, TECH Global University will make the necessary arrangements to obtain it, at an additional cost.



Clinical Neuropsychology and Neuroeducation

- » Modality: online
- » Duration: 12 months
- » Certificate: TECH Global University
- » Credits: 60 ECTS
- » Schedule: at your own pace
- » Exams: online

