# Hybrid Professional Master's Degree

## Neuropsychology and Education

tech technological university

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# Hybrid Professional Master's Degree

## Neuropsychology and Education

Modality: **Hybrid (Online + Internship)**
Duration: **12 months**
Certificate: **TECH Technological University**
Teaching Hours: **1,620 h.**
Website: **www.techtitute.com/in/education/hybrid-professional-master-degree/hybrid-professional-master-degree-neuropshychology-education**

# Index

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# Introduction

Neuropsychology, applied to education, is an interdisciplinary field based on the integration of knowledge from psychology, neuroscience and education to design pedagogical strategies that fit the individual characteristics of each student. In this way, there has been a growing demand for professionals who are experts in establishing the connections between the structure and function of the brain and the cognitive, emotional and behavioral skills that are fundamental for educational performance. For this reason, TECH has created a revolutionary program that integrates a practical experience in specialized educational environments. The goal is for the professional to acquire and apply the most advanced and current strategies in their routine.

*You will implement more effective interventions, which optimize the educational environment, thereby promoting meaningful and sustainable learning"*

The application of neuropsychology to education has become an interdisciplinary field, merging neuroscience and psychology to understand how brain functioning influences cognitive processes and, therefore, learning. By analyzing these processes from a neuroscientific perspective, the teacher will be able to optimize learning environments, adapting educational methods that enhance the development of cognitive skills, attention, memory and problem solving.

It is for all these reasons that TECH has developed this comprehensive university program, in which students will explore the contemporary challenges faced by a neuropsychologist in their role as an educator. In this way, they will delve into the functioning of memory, language, the relationship between laterality and cognitive development, sensoriality and other fundamental topics that will enrich their daily practice. With this in mind, the graduate will approach the evaluation of cognitive, emotional and behavioral functions of students, identifying possible difficulties or disorders that may influence their educational performance.

This high-level course will not only enhance their professional career, but will also boost their personal growth, making them highly qualified professionals. This implies an intense challenge of permanent updating, which will allow them to be at the forefront in terms of approach, intervention and follow-up of cases that may arise in the classroom.

This theoretical knowledge will be enriched with a practical experience of 3 weeks in an outstanding specialized educational center. This intensive internship will not only specialize professionals in the design of personalized intervention strategies, but will also develop skills to optimize the cognitive, emotional and social development of students, thereby promoting more inclusive and effective educational environments.

During this period, students will have a personal tutor, dedicated entirely to monitoring their progress, providing them with exclusive attention. This closeness will allow them to work with confidence, taking advantage of the latest in educational technology and applying the most effective neuropsychological techniques to date.

This **Hybrid Professional Master's Degree in Neuropsychology and Education** contains the most complete and up-to-date program on the market. Its most notable features are:

- Development of more than 100 practical cases presented by professionals in neuropsychology and university professors with extensive experience with students with special educational needs
- Its graphic, schematic and eminently practical contents, with which they are conceived, gather essential information on those techniques essential for professional practice
- Presentation of practical workshops on the most innovative learning strategies in the educational field
- 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
- Furthermore, you will be able to carry out a internship in one of the best companies

*Add to your online study the internship in a specialized educational center, with the highest standards of quality and technological level"*

*Take an intensive 3-week internship in a prestigious educational center and acquire all the knowledge to grow personally and professionally"*

*Thanks to this Hybrid Professional Master's Degree, you will address the complex interactions between the brain, behavior and learning.*

*You will develop the most effective educational strategies adapted to the individual needs of students.*

In this Hybrid Professional Master's Degree, of a professionalizing nature and blended learning modality, the program is aimed at updating neuropsychology professionals who work in specialized educational centers, and who require a high level of qualification. The contents are based on the latest scientific evidence, and oriented in a didactic way to integrate theoretical knowledge into educational practice, and the theoretical-practical elements will facilitate the updating of knowledge and allow decision making in the management of students with problems.

Thanks to its multimedia content elaborated with the latest educational technology, they will allow the neuropsychology professional a situated and contextual learning, that is to say, a simulated environment that will provide an immersive learning programmed to train in real situations. This program is designed around Problem-Based Learning, whereby the professional must try to solve the different professional practice situations that arise throughout the program. For this purpose, the students will be assisted by an innovative interactive video system created by renowned and experienced experts.

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# Why Study this Hybrid Professional Master's Degree?

This Hybrid Professional Master's Degree in Neuropsychology and Education offers a unique opportunity to merge theory and practice in a constantly evolving field. The program will enable graduates to acquire up-to-date knowledge and practical tools to gain an in-depth understanding of how the brain functions in the learning process. With online classes and resources, you will have the flexibility to adjust your studies to your schedule, including a practical internship at a prestigious educational center. In this way, the professionals will be able to apply pedagogical strategies based on scientific evidence, equipping them with the skills to face current educational challenges with innovative solutions.

*You will apply innovative techniques in the classroom, based on a scientific understanding of the brain. Increase your impact as an educational professional!"*

### 1. Updating from the latest technology available

Technological advances in the field of Neuropsychology and Education have emerged as fundamental pillars in the optimization of learning processes. The fusion of cutting-edge technologies not only enriches teaching strategies, but also expands the arsenal of tools available to understand, evaluate and address learning difficulties. From mobile applications meticulously designed to enhance specific skills, to virtual platforms that enable the personalization of instruction, technology has evolved to become an invaluable ally, shaping and enriching the educational field.

### 2. Gaining in-depth knowledge from the experience of top specialists

A large team of outstanding professionals will be available during this internship, offering solid support and ensuring high-quality learning. Guided by a personal tutor, the student will be immersed in interactions with real students in an innovative environment. This experience will enable you to effectively incorporate, in your professional practice, the most efficient methods in Neuropsychology and Education.

### 3. Entering first-class professional environments

TECH has made a thorough selection of each educational center available for internships, ensuring that specialists gain access to world-class environments in Neuropsychology and Education. This rigorous compilation ensures that graduates are immersed in demanding work environments, allowing them to experience, first hand, the day to day life in these prestigious environments. In addition, this opportunity gives them the chance to apply the most effective techniques in neuropsychology, significantly enriching their professional working methods.



### 4. Combining the best theory with state-of-the-art practice

Within the academic field, there are many educational programs that do not fit the daily demands of specialists, requiring long hours of study and sometimes being difficult to balance with personal and professional life. In contrast, TECH introduces an innovative approach: a completely practical learning model that qualifies professionals in the latest techniques of Neuropsychology in education, allowing them to implement them in their professional work in a short period of 3 weeks.

### 5. Opening the door to new opportunities

Exploring the vast territory of Neuropsychology, applied to education, is to enter a world full of possibilities. This path brings with it the opportunity to assume essential roles in the conception and application of cutting-edge educational programs, as well as in the creation of teaching strategies adapted to the particularities of each student. It also opens the door to new research, the development of innovative curricular materials with cutting-edge technology, and the provision of specialized advice to families and communities in diverse contexts.

*You will have full practical immersion at the center of your choice"*

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# Objectives

The design of this Hybrid Professional Master's Degree aims to provide teachers with the theoretical and practical tools necessary to become agents of change in the educational field. Through an innovative and up-to-date approach, they will explore the complexities of the brain throughout the learning process, designing effective pedagogical strategies adapted to the individual needs of each student. With a perfect balance between theory and practice, this program will allow the graduate to explore new ways of teaching based on neuroeducational science, making a significant difference in the world of education.

*This program will give you the opportunity to update your knowledge in real scenarios, in an institution at the forefront of technology"*

## General Objective

- The general objective of the Hybrid Professional Master's Degree in Neuropsychology and Education is to qualify professionals committed to educational excellence. This program will offer a deep immersion in the field of neuropsychology applied to education, providing the student with the practical tools and up-to-date knowledge to transform the learning process. With a unique combination of flexibility and academic rigor, the graduate will be prepared to lead significant changes in the educational field, promoting innovative, science-based strategies that positively impact students

*This program will generate a sense of confidence in the performance of your daily practice, helping you to grow personally and professionally"*



## Specific Objectives

### Module 1. Basis of Neurosciences

- Study the anatomy of the brain and its relationship to learning
- Learn the brain basis of motor development
- Explore the quality of brain plasticity
- Analyze the various agents affecting child, adolescent and adult brain development

### Module 2. Developmental Neuropsychology

- Study the neurobiological basis of development
- Explore the bases of differential cognitive functioning
- Develop educational applications of metacognitive regulation and neurobiological markers
- Learn to make a clinical diagnosis based on the knowledge learnt

### Module 3. Neuroeducation

- Reflect on the meaning of neuroeducation
- Study the peculiarities and fundamental characteristics of the different areas of the brain associated with emotions and learning
- Learn the different forms and techniques of intervention in education

### Module 4. Visual and Auditory Functionality for Reading, Language, Languages and Learning

- Learn about the characteristics and development of the organs of sight
- Detect, evaluate and intervene in the classroom with visually impaired students
- Acquire the ability to work for the improvement of visual perception
- Become familiar with vision and reading skill training programs
- Study the saccadic models
- Develop characteristics and development of the organs of the ear
- Learn about the risk factors
- Identify ways to detect, evaluate and intervene in the classroom with hearing impaired students
- Acquire the ability to work for the improvement of hearing
- Know the psychobiological aspects of hearing loss
- Develop the necessary skills to make curricular adaptations in this area
- Study all the implications of visual and auditory problems on literacy learning

### Module 5. Motor Skills, Laterality and Writing

- Delve into the relationship between learning and neurodevelopment in the educational field
- Study aspects related to gross and fine psychomotor skills
- Know the relationship between motor skills and the psyche and its developmental implications
- Study laterality in relation to the development of cognitive abilities
- Develop the different degrees of evolution in the evolutionary lateral stages
- Learning the different motor disorders from their impact on learning
- Unravel all aspects of the reading acquisition process
- Learn how to intervene in the possible difficulties related to learning in the classroom: dysgraphia, dyscalculia, dyslexia
- Develop intervention models for prevention, development and learning difficulties in the school environment
- Develop communication and relationship skills with fathers, mothers and families

### Module 6. Research Methodology

- Learn research methodology and its different approaches
- Develop a complete research method, from the choice of the topic, to the proposal and production
- Learn how to conduct quantitative research and analysis of results
- Learn descriptive statistics
- Learn how to develop a hypothesis test and interpret it
- Study the use of correlational and group comparison statistics and be able to use them in research

### Module 7. Multiple Intelligences, Creativity, Talent and High Abilities

- Learn all aspects related to the theory of multiple intelligences and their assessment
- Learn the neuropsychological basis of creativity and its development in the educational context
- Know the possibilities of working in the area of high abilities

### Module 8. Dyslexia, Dyscalculia and Hyperactivity

- Incorporate the necessary knowledge to detect and intervene in the classroom in cases of dyscalculia, dyslexia and TDH
- Understand the incidence of comorbidity in this context
- Know the possibilities of neurotechnology applied to dyslexia, ADHD and dyscalculia

### Module 9. Neurolinguistic Processes, Difficulties and Intervention Programs

- Develop the neurobiological aspects involved in language development
- Study the neuropsychological bases of language and the possibilities of language work and development
- Analyze the processes of language comprehension, sounds and reading comprehension
- Analyze language and literacy disorders
- Learn how to assess, diagnose and intervene in language difficulties

### Module 10. Emerging Educational Alternatives for the Management of Learning Difficulties

- Learn about information and communication technologies and how they are linked to the management of difficulties
- Know the use of ICTs in educational centers
- Discover the benefits of chess as an educational tool
- Knowledge of the benefits of medication for the management of difficulties

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# Skills

After passing the evaluations of the Hybrid Professional Master's Degree in Neuropsychology and Education, the teaching professional will have acquired the comprehensive skills to excel in today's educational field. From a deep understanding of the neuroscientific foundations of learning, to the ability to design and implement innovative teaching strategies, this program will equip the graduate with the indispensable practical and theoretical skills. In this way, it will address the individual needs of students, promoting inclusive and effective learning environments.

*This program will transform you into a professional with a holistic perspective, ready to make a tangible difference in education"*

## General Skills

- Apply neuropsychology in the educational environment
- Conduct programs to improve school performance
- Apply the research methods of educational neuropsychology
- Construct new ways of attending to diversity in the classroom

## Specific Skills

- Recognize the anatomy of the brain and its relationship with the development of different learning processes from the motor, sensory, emotional, etc. point of view
- Employ the knowledge of neuropsychology in the development of diverse intervention programs in all areas of school development
- Apply the data extracted from the analysis of neurology in clinical diagnosis, supported by specific knowledge of developmental neurosychology
- Put into practice the different forms of intervention in the educational field based on the data extracted from the analysis of brain functionality in the area of emotions and learning
- Work with sensory difficulties in the school environment, from a neuropsychological approach based on a deep knowledge of visual and auditory functionality
- Implement brain stimulation strategies in the educational environment through the development of motor skills and laterality
- Devise, develop and analyze comprehensive research in the area of neuropsychology in the educational setting
- Apply new strategies in cases of high abilities
- Be able to program while taking into account multiple intelligences and fosteringtalent and creativity
- Develop efficient intervention programs for students with dyscalculia, dyslexia and hyperactivity
- Perform effective assessment, diagnosis and intervention of language difficulties
- Learn about information and communication technologies and how they are linked to the management of difficulties

*Update your knowledge in neuropsychology to provide a quality intervention for students with learning disabilities"*

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# Course Management

The faculty of this Hybrid Professional Master's Degree in Neuropsychology and Education are experts committed to providing an exceptional educational experience. Their dedication goes beyond transmitting knowledge, as they are passionate mentors who will guide the graduate on their way to a deep understanding of the convergence between neuropsychology and education With their vast experience, they will prepare the professional to lead the educational revolution with confidence and innovative vision.

*Leading professionals in the area of neuropsychology applied to education will provide you with the most relevant advances in this field"*

## Management

### Ms. Sánchez Padrón, Nuria Ester

- General Health Psychologist
- Teacher of Educational Reinforcement at Radio ECCA
- Degree in Psychology from La Laguna University
- Master's Degree in General Health Psychology from the University of La Rioja
- Specialist in Emergency Psychological Care of the Red Cross
- Specialist in Psychological Care in Penitentiary Institutions

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# Educational Plan

The syllabus has been conceived as a journey into a deeper understanding of the brain and its impact on learning. From neuroscientific foundations to practical applications in the classroom, each module is designed to address new perspectives and innovative teaching strategies. This approach will qualify the teacher to design personalized interventions that transform the learning experience of students. In this way, you will be equipped with the necessary tools to understand, in a deep and up-to-date way, how the brain works in the teaching-learning process.

*Benefit from online classes and resources, which will give you the convenience and flexibility to learn at your own pace"*

## **Module 1.** Basis of Neurosciences

1.1. The Nervous System and Neurons
- 1.1.1. Introduction
- 1.1.2. Development and Latest Approaches

1.2. Basic Anatomy of Learning-Related Structures
- 1.2.1. Description
- 1.2.2. Physiology of Learning

1.3. Psychological Processes Related to Learning
- 1.3.1. Emotions and Learning
- 1.3.2. Emotional Approaches

1.4. The Main Brain Structures Related to Motor Skills
- 1.4.1. Brain and Motor Development
- 1.4.2. Laterality and Development

1.5. The Plastic Brain and Neuroplasticity
- 1.5.1. Definition of Plasticity
- 1.5.2. Neuroplasticity and Education

1.6. Epigenetics
- 1.6.1. Definition and Origins

1.7. Effects of the Environment on Brain Development
- 1.7.1. Current Theories
- 1.7.2. The Influence of the Environment on Child Development

1.8. Changes in the Infant's Brain
- 1.8.1. Brain Development in Infancy
- 1.8.2. Features

1.9. Evolution of the Adolescent Brain
- 1.9.1. Brain Development in Adolescence
- 1.9.2. Features

1.10. The Adult Brain
- 1.10.1. Characteristics of the Adult Brain
- 1.10.2. The Adult Brain and Learning

## **Module 2.** Developmental Neuropsychology

2.1. Neuroscience
- 2.1.1. Introduction
- 2.1.2. Concept of Neuroscience
- 2.1.3. Neuromyths

2.2. The Brain: Structure and Operation
- 2.2.1. Primary Brain Structures
- 2.2.2. Triune Model
- 2.2.3. Bilateral Model
- 2.2.4. Cognitive Brain and Emotional Brain
- 2.2.5. Neurons
- 2.2.6. What are Neurotransmitters?

2.3. Neuroscience and Learning
- 2.3.1. What is learning?
- 2.3.2. Mirror Neurons
- 2.3.3. Levels of Learning
- 2.3.4. Learning Styles
- 2.3.5. Types of Learning

2.4. Multiple intelligences
- 2.4.1. Definition
- 2.4.2. Classification
- 2.4.3. Multiple Intelligences and Neurodidactics
- 2.4.4. Multiple Intelligences in the Classroom
- 2.4.5. Advantages and Drawbacks in Education

2.5. Neuroscience - Education
- 2.5.1. Neuroeducation
- 2.5.2. Memory
- 2.5.3. Emotion
- 2.5.4. Attention
- 2.5.5. Motivation
- 2.5.6. Contributions of Neurodidactics to Learning Strategies

2.6. Neuroscience in the Classroom
- 2.6.1. The figure of the Neuroeducator
- 2.6.2. Neuroeducational and Neuropedagogical Importance
- 2.6.3. Empathic Attitude and Learning
- 2.6.4. Classroom Applications
- 2.6.5. Classroom Organization

2.7. Playing and New Technologies
- 2.7.1. Etymology of Playing
- 2.7.2. Benefits of Playing
- 2.7.3. Learning by Playing
- 2.7.4. The Neurocognitive Process
- 2.7.5. Basic Principles of Educational Games
- 2.7.6. Neuroeducation and Board Games
- 2.7.7. Educational Technology and Neuroscience
- 2.7.8. Development of Executive Functions

2.8. Body and Brain
- 2.8.1. The Connection between Body and Brain
- 2.8.2. The Social Brain
- 2.8.3. How do we prepare the Brain for Learning?
- 2.8.4. Feeding
- 2.8.5. Rest and Learning

2.9. Neuroscience for preventing School Failure
- 2.9.1. Benefits of Neuroscience
- 2.9.2. Elements for a Success-oriented Pedagogy
- 2.9.3. Some suggestions for improving the Learning Process

2.10. Reason and Emotion
- 2.10.1. The Binomial Reason and Emotion
- 2.10.2. What are Emotions good for?
- 2.10.3. Why Educate Emotions in the Classroom
- 2.10.4. Effective Learning through Emotions

## **Module 3.** Neuroeducation

3.1. Introduction to Neuroeducation
3.2. Main Neuromyths
3.3. Attention
3.4. Emotion
3.5. Motivation
3.6. The Learning Process
3.7. Memory
3.8. Stimulation and Early Interventions
3.9. Importance of Creativity in Neuroeducation
3.10. Methodologies that Allow the Transformation of Education into Neuroeducation

## **Module 4.** Visual and Auditory Functionality for Reading, Language, Languages and Learning

4.1. Vision: Functioning and Neuropsychological Bases
- 4.1.1. Introduction
- 4.1.2. Development of the Visual System at Birth
- 4.1.3. Risk Factors
- 4.1.4. Development of Other Sensory Systems During Infancy
- 4.1.5. Influence of Vision on the Visuomotor System and its Development
- 4.1.6. Normal and Binocular Vision
- 4.1.7. Anatomy of Human Eyes
- 4.1.8. Eye Functions
- 4.1.9. Other Functions
- 4.1.10 Visual Pathways to the Cerebral Cortex
- 4.1.11. Elements that Favor Visual Perception
- 4.1.12 Vision Diseases and Alterations
- 4.1.13 Most Common Eye Disorders or Diseases: Classroom Interventions
- 4.1.14 Computer Vision Syndrome (CVS)
- 4.1.15 Attitudinal Observation of the Student
- 4.1.16 Summary
- 4.1.17 Bibliographical References

4.2. Visual Perception, Assessment and Intervention Programs
- 4.2.1. Introduction
- 4.2.2. Human Development: Development of the Sensory Systems
- 4.2.3. Sensory Perception
- 4.2.4. Neurodevelopment
- 4.2.5. Description of the Perceptual Process
- 4.2.6. Color Perception
- 4.2.7. Perception and Visual Skills
- 4.2.8. Evaluation of Visual Perception
- 4.2.9. Intervention for the Improvement of Visual Perception
- 4.2.10 Summary
- 4.2.11 Bibliographical References

4.3. Tracking Eye Movements
- 4.3.1. Introduction
- 4.3.2. Eye Movements
- 4.3.3. Tracking Eye Movements
- 4.3.4. Ocular Motility Recording and Assessment
- 4.3.5. Ocular Motility-Related Disorders
- 4.3.6. The Visual System and Reading
- 4.3.7. Development of Skills in Learning to Read
- 4.3.8. Improvement and Training Programs and Activities
- 4.3.9. Summary
- 4.3.10. Bibliographical References

4.4. Saccadic Movements and Their Implication in Reading
- 4.4.1. Introduction
- 4.4.2. Models of the Reading Process
- 4.4.3. Saccadic Movements and Their Relation to Reading
- 4.4.4. How are Saccadic Movements Evaluated?
- 4.4.5. The Reading Process at the Visual Level
- 4.4.6. Visual Memory in the Reading Process
- 4.4.7. Investigations to Study the Relationship Between Visual Memory and Reading
- 4.4.8. Reading Difficulties
- 4.4.9. Specialized Teachers
- 4.4.10 Social Educators
- 4.4.11. Summary
- 4.4.12 Bibliographical References

4.5. Visual Accommodation and its Relation to Posture in the Classroom
- 4.5.1. Introduction
- 4.5.2. Mechanisms that Allow for Accommodation or Focus
- 4.5.3. How is Visual Accommodation Assessed?
- 4.5.4. Body Posture in the Classroom
- 4.5.5. Visual Accommodation Training Programs
- 4.5.6. Aids for Visually Impaired Students
- 4.5.7. Summary
- 4.5.8. Bibliographical References

4.6. Structure and Function of the Ear
- 4.6.1. Introduction
- 4.6.2. The World of Sound
- 4.6.3. Sound and its Propagation
- 4.6.4. The Auditory Receptors
- 4.6.5. Ear Structure
- 4.6.6. Development of the Hearing System at Birth
- 4.6.7. Development of Sensory Systems during Infancy
- 4.6.8. Influence of the Ear on Balance Development
- 4.6.9. Ear Diseases
- 4.6.10 Summary
- 4.6.11. Bibliographical References

4.7. Auditory Perception
- 4.7.1. Introduction
- 4.7.2. Guidelines for Detecting Auditory Perception Problems
- 4.7.3. The Perceptive Process
- 4.7.4. Role of the Auditory Pathways in Perceptual Processes
- 4.7.5. Children with Impaired Auditory Perception
- 4.7.6. Evaluation Tests
- 4.7.7. Summary
- 4.7.8. Bibliographical References

4.8. Evaluation of Hearing and its Alterations
- 4.8.1. Introduction
- 4.8.2. Evaluation of the External Auditory Canal
- 4.8.3. Otoscopy
- 4.8.4. Air Audiometry
- 4.8.5. Bone Conduction Hearing
- 4.8.6. Curve of the Pain Threshold
- 4.8.7. Tone Audiometry, Vocal Audiometry and Acoustic Audiometry
- 4.8.8. Hearing Impairment: Degrees and Types of Hearing Loss
- 4.8.9. Causes of Hearing Loss
- 4.8.10. Psychobiological Aspects of Hearing Impairment
- 4.8.11. Summary
- 4.8.12. Bibliographical References

4.9. Hearing and Learning Development
- 4.9.1. Introduction
- 4.9.2. Development of the Human Ear
- 4.9.3. Programs, Activities and Games for Auditory Development in Children
- 4.9.4. Berard Method
- 4.9.5. Tomatis Method
- 4.9.6. Visual and Hearing Health
- 4.9.7. Adaptations of Curricular Elements
- 4.9.8. Summary
- 4.9.9. Bibliographical References

4.10. Vision and Hearing Processes Involved in Reading
- 4.10.1. Introduction
- 4.10.2. Tracking Eye Movements
- 4.10.3. The Visual System and Reading
- 4.10.4. Dyslexia
- 4.10.5. Color-Based Therapies for Dyslexia
- 4.10.6. Visual Impairment Aids
- 4.10.7. Summary
- 4.10.8. Bibliographical References

4.11. Relationship Between Vision and Hearing in Language
- 4.11.1. Introduction
- 4.11.2. Relationship Between Vision and Hearing
- 4.11.3. Verbal-Auditory and Visual Information Processing
- 4.11.4. Intervention Programs for Hearing Disorders
- 4.11.5. Guidelines for Teachers
- 4.11.6. Summary
- 4.11.7. Bibliographical References

## **Module 5.** Motor Skills, Laterality and Writing

5.1. Neurodevelopment and Learning
- 5.1.1. Introduction
- 5.1.2. Perceptual Development
- 5.1.3. Neuropsychological Basis of Motor Development
- 5.1.4. Laterality Development
- 5.1.5. Interhemispheric Communication through the Corpus Callosum
- 5.1.6. Ambidextrousness
- 5.1.7. Summary
- 5.1.8. Bibliographical References

5.2. Psychomotor Development
- 5.2.1. Introduction
- 5.2.2. Gross Psychomotricity
- 5.2.3. General Dynamic Coordination: Basic Skills
- 5.2.4. Fine Motor Skills and their Relationship with Writing
- 5.2.5. Psychomotor Development Assessment
- 5.2.6. Summary
- 5.2.7. Bibliographical References

5.3. Neuropsychology of Motor Development
- 5.3.1. Introduction
- 5.3.2. Relationship between Motor and Psychism
- 5.3.3. Disorders of Motor Development
- 5.3.4. Coordination Acquisition Disorders
- 5.3.5. Vestibular System Disorders
- 5.3.6. Writing
- 5.3.7. Summary
- 5.3.8. Bibliographical References

5.4. Introduction to Laterality Development
- 5.4.1. Introduction
- 5.4.2. Laterality Tests
- 5.4.3. Observation Guidelines for Teachers
- 5.4.4. Crossed Laterality
- 5.4.5. Types of Cross Laterality
- 5.4.6. Relationship between Dyslexia and Laterality
- 5.4.7. Relationship between Laterality and Attention, Memory and Hyperactivity Problems
- 5.4.8. Summary
- 5.4.9. Bibliographical References

5.5. Development of Laterality at Different Ages
- 5.5.1. Introduction
- 5.5.2. Laterality Definition
- 5.5.3. Types of Laterality
- 5.5.4. Corpus Callosum
- 5.5.5. Cerebral Hemispheres
- 5.5.6. Development of the Prelateral, Contralateral and Lateral Stages
- 5.5.7. Summary
- 5.5.8. Bibliographical References

5.6. Motor Disorders and Related Learning Difficulties
- 5.6.1. Introduction
- 5.6.2. Motor Disorders
- 5.6.3. Learning Difficulties
- 5.6.4. Summary
- 5.6.5. Bibliographical References

5.7. Writing Process and Acquisition
- 5.7.1. Introduction
- 5.7.2. Reading Difficulties
- 5.7.3. Comprehension Problems that Students May Develop
- 5.7.4. Evolutionary Development of Writing
- 5.7.5. History of Writing
- 5.7.6. Neuropsychological Basis of Writing
- 5.7.7. Teaching Written Expression
- 5.7.8. Methods of Teaching Writing
- 5.7.9. Writing Workshops
- 5.7.10. Summary
- 5.7.11. Bibliographical References

5.8. Dysgraphia
- 5.8.1. Introduction
- 5.8.2. Learning Styles
- 5.8.3. Executive Functions Involved in Learning
- 5.8.4. Definition of Dysgraphia and Types
- 5.8.5. Common Indicators of Dysgraphia
- 5.8.6. Classroom Aids for Students with Dysgraphia
- 5.8.7. Individual Aids
- 5.8.8. Summary
- 5.8.9. Bibliographical References

5.9. Contribution of Laterality to the Development of Reading and Writing
- 5.9.1. Introduction
- 5.9.2. Importance of Laterality in the Learning Process
- 5.9.3. Laterality in the Reading and Writing Processes
- 5.9.4. Laterality and Learning Difficulties
- 5.9.5. Summary
- 5.9.6. Bibliographical References

5.10. Role of the School Psychologist and Guidance Counselors for Prevention, Development and Learning Difficulties
- 5.10.1. Introduction
- 5.10.2. The Guidance Department
- 5.10.3. Intervention Programs
- 5.10.4. Advances of Neuropsychology in Learning Difficulties
- 5.10.5. Training the Teaching Staff
- 5.10.6. Summary
- 5.10.7. Bibliographical References

5.11. Parent Orientation
- 5.11.1. How to Inform Parents
- 5.11.2. Activities to Improve Academic Performance
- 5.11.3. Activities to Improve Lateral Development
- 5.11.4. Problem-Solving Strategies
- 5.11.5. Summary
- 5.11.6. Bibliographical References

5.12. Psychomotor Assessment and Intervention
- 5.12.1. Introduction
- 5.12.2. Psychomotor Development
- 5.12.3. Psychomotor Assessment
- 5.12.4. Psychomotor Intervention
- 5.12.5. Summary
- 5.12.6. Bibliographical References

## **Module 6.** Research Methodology

6.1. Research Methodology
- 6.1.1. Introduction
- 6.1.2. The Importance of Research Methodology
- 6.1.3. Scientific Knowledge
- 6.1.4. Research Approaches
- 6.1.5. Summary
- 6.1.6. Bibliographical References

6.2. Choosing the Topic to Research
- 6.2.1. Introduction
- 6.2.2. The Issue of Research
- 6.2.3. Defining the Problem
- 6.2.4. Choice of the Research Question
- 6.2.5. Research Objectives
- 6.2.6. Variables: Types
- 6.2.7. Summary
- 6.2.8. Bibliographical References

6.3. Research Proposal
- 6.3.1. Introduction
- 6.3.2. Research Hypothesis
- 6.3.3. Feasibility of the Research Project
- 6.3.4. Introduction and Justification of the Research
- 6.3.5. Summary
- 6.3.6. Bibliographical References

6.4. Theoretical Framework
- 6.4.1. Introduction
- 6.4.2. Elaboration of the Theoretical Framework
- 6.4.3. Resources Used
- 6.4.4. APA Standards
- 6.4.5. Summary
- 6.4.6. Bibliographical References

6.5. Bibliography
- 6.5.1. Introduction
- 6.5.2. Importance of Bibliographic References
- 6.5.3. How to Reference According to APA Standards?
- 6.5.4. Format of Annexes: Tables and Figures
- 6.5.5. Bibliography Managers: What Are They? How to Use Them?
- 6.5.6. Summary
- 6.5.7. Bibliographical References

6.6. Methodological Framework
- 6.6.1. Introduction
- 6.6.2. Roadmap
- 6.6.3. Sections to be Included in the Methodological Framework
- 6.6.4. The Population
- 6.6.5. The Sample
- 6.6.6. Variables
- 6.6.7. Instruments
- 6.6.8. Procedure
- 6.6.9. Summary
- 6.6.10 Bibliographical References

6.7. Research Designs
- 6.7.1. Introduction
- 6.7.2. Types of Designs
- 6.7.3. Characteristics of the Designs Used in Psychology
- 6.7.4. Research Designs Used in Education
- 6.7.5. Research Designs Used in Education Neuropsychology
- 6.7.6. Summary
- 6.7.7. Bibliographical References

6.8. Quantitative Research I
- 6.8.1. Introduction
- 6.8.2. Designing Randomized Groups
- 6.8.3. Designing Randomized Groups with Blocks
- 6.8.4. Other Designs used in Psychology
- 6.8.5. Statistical Techniques in Quantitative Research
- 6.8.6. Summary
- 6.8.7. Bibliographical References

6.9. Quantitative Research II
- 6.9.1. Introduction
- 6.9.2. Unifactorial Intrasubject Designs
- 6.9.3. Techniques for Controlling the Effects of Intrasubject Designs
- 6.9.4. Statistical Techniques
- 6.9.5. Summary
- 6.9.6. Bibliographical References

6.10. Results
- 6.10.1 Introduction
- 6.10.2. How to Gather Data?
- 6.10.3. How to Analyze Data?
- 6.10.4. Statistical Programs
- 6.10.5. Summary
- 6.10.6. Bibliographical References

6.11. Descriptive Statistics
- 6.11.1. Introduction
- 6.11.2. Research Variables
- 6.11.3. Quantitative Analyses
- 6.11.4. Qualitative Analyses
- 6.11.5. Resources that Can Be Used
- 6.11.6. Summary
- 6.11.7. Bibliographical References

6.12. Hypothesis Contrast
- 6.12.1. Introduction
- 6.12.2. Statistical Hypotheses
- 6.12.3. How to Interpret Significance (P-Value)?
- 6.12.4. Criteria for Analyzing Parametric and Non-Parametric Tests
- 6.12.5. Summary
- 6.12.6. Bibliographical References

6.13. Correlational Statistics and Independence Analysis
- 6.13.1. Introduction
- 6.13.2. Pearson Correlation
- 6.13.3. Spearman's Correlation and Chi-Square
- 6.13.4. Results
- 6.13.5. Summary
- 6.13.6. Bibliographical References

6.14. Group Comparison Statistics
- 6.14.1. Introduction
- 6.14.2. Mann-Whitney T-Test and Mann-Whitney U-Test
- 6.14.3. T-Test and Wilcoxon Signed Ranges
- 6.14.4. The Results
- 6.14.5. Summary
- 6.14.6. Bibliographical References

6.15. Discussion and Conclusions
- 6.15.1. Introduction
- 6.15.2. What is Discussion
- 6.15.3. Organization of the Discussion
- 6.15.4. Conclusions
- 6.15.5. Limitations and Outlook
- 6.15.6. Summary
- 6.15.7. Bibliographical References

6.16. Producing the Final Master's Degree Dissertation
- 6.16.1. Introduction
- 6.16.2. Front Page and Contents
- 6.16.3. Introduction and Justification
- 6.16.4. Theoretical Framework
- 6.16.5. Methodological Framework
- 6.16.6. The Results
- 6.16.7. Intervention Program
- 6.16.8. Discussion and Conclusions
- 6.16.9. Summary
- 6.16.10. Bibliographical References

## **Module 7.** Multiple Intelligences, Creativity, Talent and High Abilities

7.1. Theory of Multiple Intelligences
- 7.1.1. Introduction
- 7.1.2. Background
- 7.1.3. Conceptualization
- 7.1.4. Validation
- 7.1.5. Premises and Basic Principles of Theories
- 7.1.6. Neuropsychological and Cognitive Science
- 7.1.7. Classification of the Theories of Multiple Intelligences
- 7.1.8. Summary
- 7.1.9. Bibliographical References

7.2. Types of Multiple Intelligences
- 7.2.1. Introduction
- 7.2.2. Types of Intelligence
- 7.2.3. Summary
- 7.2.4. Bibliographical References

7.3. Assessment of Multiple Intelligences
- 7.3.1. Introduction
- 7.3.2. Background
- 7.3.3. Types of Assessments
- 7.3.4. Aspects to Consider in the Assessment
- 7.3.5. Summary
- 7.3.6. Bibliographical References

7.4. Creativity
- 7.4.1. Introduction
- 7.4.2. Concepts and Theories of Creativity
- 7.4.3. Approaches to the Study of Creativity
- 7.4.4. Characteristics of Creative Thinking
- 7.4.5. Types of Creativity
- 7 4.6. Summary
- 7.4.7. Bibliographical References

7.5. Neuropsychological Basis of Creativity
- 7.5.1. Introduction
- 7.5.2. Background
- 7.5.3. Characteristics of Creative People
- 7.5.4. Creative Products
- 7.5.5. Neuropsychological Bases of Creativity
- 7.5.6. Influence of the Environment and Context on Creativity
- 7.5.7. Summary
- 7.5.8. Bibliographical References

7.6. Creativity in the Educational Context
- 7.6.1. Introduction
- 7.6.2. Creativity in the Classroom
- 7.6.3. Stages of the Creative Process
- 7.6.4. How to Work on Creativity?
- 7.6.5. Connection Between Creativity and Thinking
- 7.6.6. Modification in the Educational Context
- 7.6.7. Summary
- 7.6.8. Bibliographical References

7.7. Methodologies for Developing Creativity
- 7.7.1. Introduction
- 7.7.2. Programs for Developing Creativity
- 7.7.3. Projects for Developing Creativity
- 7.7.4. Promoting Creativity in the Family Context
- 7.7.5. Summary
- 7.7.6. Bibliographical References

7.8. Creativity Assessment and Guidance
- 7.8.1. Introduction
- 7.8.2. Considerations on Assessment
- 7.8.3. Evaluation Tests
- 7.8.4. Subjective Assessment Tests
- 7.8.5. Guidance on Assessment
- 7.8.6. Summary
- 7.8.7. Bibliographical References

7.9. High Capacities and Talents
- 7.9.1. Introduction
- 7.9.2. Relationship Between Giftedness and High Capacities
- 7.9.3. Connection Between Heredity and Environment
- 7.9.4. Neuropsychological Foundation
- 7.9.5. Models of Giftedness
- 7.9.6. Summary
- 7.9.7. Bibliographical References

7.10. Identification and Diagnosis of High Capacities
- 7.10.1. Introduction
- 7.10.2. Main Characteristics
- 7.10.3. How to Identify High Capacities?
- 7.10.4. Role the Involved Agents
- 7.10.5. Assessment Tests and Instruments
- 7.10.6. Intervention Programs
- 7.10.7. Summary
- 7.10.8. Bibliographical References

7.11. Problems and Difficulties
- 7.11.1. Introduction
- 7.11.2. Problems and Difficulties in the School Environment
- 7.11.3. Myths and Beliefs
- 7.11.4. Desynchronies
- 7.11.5. Differential Diagnosis
- 7.11.6. Differences Between Genders
- 7.11.7. Educational Needs
- 7.11.8. Summary
- 7.11.9. Bibliographical References

7.12. Connection Between Multiple Intelligences, High Capacities, Talent and Creativity
- 7.12.1. Introduction
- 7.12.2. Connection Between Multiple Intelligences and Creativity
- 7.12.3. Connection Between Multiple Intelligences, High Capacities and Talents
- 7.12.4. Differences Between Talent and High Capacities
- 7.12.5. Creativity, High Capacities and Talent
- 7.12.6. Summary
- 7.12.7. Bibliographical References

7.13. Guiding and Developing Multiple Intelligences
- 7.13.1. Introduction
- 7.13.2. Advising Teachers
- 7.13.3. Multidimensional Student Development
- 7.13.4. Curricular Enrichment
- 7.13.5. Strategies at Different Educational Levels
- 7.13.6. Summary
- 7.13.7. Bibliographical References

7.14. Creativity for Problem-Solving
- 7.14.1. Introduction
- 7.14.2. Models of the Creative Process for Problem Solving
- 7.14.3. Creative Project Development
- 7.14.4. Summary
- 7.14.5. Bibliographical References

7.15. Educational Process and Family Support
- 7.15.1. Introduction
- 7.15.2. Guidelines for Teachers
- 7.15.3. Educational Response in Children
- 7.15.4. Educational Response in Primary Education
- 7.15.5. Educational Response in Secondary Education
- 7.15.6. Coordination with Families
- 7.15.7. Program Implementation
- 7.15.8. Summary
- 7.15.9. Bibliographical References



## **Module 8.** Dyslexia, Dyscalculia and Hyperactivity

8.1. History of Learning Difficulties
- 8.1.1. Introduction
- 8.1.2. Definition of Learning Difficulties
- 8.1.3. Historical Development
- 8.1.4. Current Learning Difficulties
- 8.1.5. Neuropsychology of Learning Difficulties
- 8.1.6. Causes of Learning Difficulties
- 8.1.7. Classification of Learning Difficulties
- 8.1.8. Summary
- 8.1.9. Bibliographical References

8.2. Conceptualization of Dyslexia
- 8.2.1. Introduction
- 8.2.2. Definition
- 8.2.3. Neuropsychological Bases
- 8.2.4. Features
- 8.2.5. Subtypes
- 8.2.6. Summary
- 8.2.7. Bibliographical References

8.3. Neuropsychological Assessment of Dyslexia
- 8.3.1. Introduction
- 8.3.2. Diagnostic Criteria for Dyslexia
- 8.3.3. How to Assess it?
- 8.3.4. Interview with the Tutor
- 8.3.5. Reading and Writing
- 8.3.6. Neuropsychological Assessment
- 8.3.7. Assessment of Other Related Aspects
- 8.3.8. Summary
- 8.3.9. Bibliographical References

8.4. Neuropsychological Intervention of Dyslexia
- 8.4.1. Introduction
- 8.4.2. Variables Involved
- 8.4.3. Neuropsychological Field
- 8.4.4. Intervention Programs
- 8.4.5. Summary
- 8.4.6. Bibliographical References

8.5. Conceptualization of Dyscalculia
- 8.5.1. Introduction
- 8.5.2. Definition of Dyscalculia
- 8.5.3. Features
- 8.5.4. Neuropsychological Bases
- 8.5.5. Summary
- 8.5.6. Bibliographical References

8.6. Neuropsychological Assessment of Dyscalculia
- 8.6.1. Introduction
- 8.6.2. Assessment Objectives
- 8.6.3. How to Assess it?
- 8.6.4. Report
- 8.6.5. Diagnosis
- 8.7.6. Summary
- 8.6.7. Bibliographical References

8.7. Neuropsychological Interventions of Dyscalculia
- 8.7.1. Introduction
- 8.7.2. Variables Involved in the Treatment
- 8.7.3. Neuropsychological Rehabilitation
- 8.7.4. Intervention in Dyscalculia
- 8.7.5. Summary
- 8.7.6. Bibliographical References

8.8. Conceptualization of ADHD
- 8.8.1. Introduction
- 8.8.2. TDAH definition
- 8.8.3. Neuropsychological Bases
- 8.8.4. Characteristics of Children with ADHD
- 8.8.5. Subtypes
- 8.8.6. Summary
- 8.8.7. Bibliographical References

8.9. Neuropsychological Assessment of ADHD
- 8.9.1. Introduction
- 8.9.2. Assessment Objectives
- 8.9.3. How to Assess it?
- 8.9.4. Report
- 8.9.5. Diagnosis
- 8.9.6. Summary
- 8.9.7. Bibliographical References

8.10. Neuropsychological Interventions of ADHD
- 8.10.1. Introduction
- 8.10.2. Neuropsychological Field
- 8.10.3. Treatment of ADHD
- 8.10.4. Other Therapies
- 8.10.5. Intervention Programs
- 8.10.6. Summary
- 8.10.7. Bibliographical References

8.11. Comorbidity in Neurodevelopmental Disorders
- 8.11.1. Introduction
- 8.11.2. Neurodevelopment Disorders
- 8.11.3. Dyslexia and Dyscalculia
- 8.11.4. Dyslexia and ADHD
- 8.11.5. Dyscalculia and ADHD
- 8.11.6. Summary
- 8.11.7. Bibliographical References

8.12. Neurotechnology
- 8.12.1. Introduction
- 8.12.2. Applied to Dyslexia
- 8.12.3. Applied to Dyscalculia
- 8.12.4. Applied to ADHD
- 8.12.5. Summary
- 8.12.6. Bibliographical References

8.13. Guidance for Parents and Teachers
- 8.13.1. Introduction
- 8.13.2. Guidance on Dyslexia
- 8.13.3. Guidance on Dyscalculia
- 8.13.4. Guidance on ADHD
- 8.13.5. Summary
- 8.13.6. Bibliographical References

## **Module 9.** Neurolinguistic Processes, Difficulties and Intervention Programs

9.1. Neurobiological Basis Involved in Language
- 9.1.1. Introduction
- 9.1.2. Language Definitions
- 9.1.3. Historical Background
- 9.1.4. Summary
- 9.1.5. Bibliographical References

9.2. Language Development
- 9.2.1. Introduction
- 9.2.2. Appearance of Language
- 9.2.3. Acquisition of Language
- 9.2.4. Summary
- 9.2.5. Bibliographical References

9.3. Neuropsychological Approaches to Language
- 9.3.1. Introduction
- 9.3.2. Brain Processes of Language
- 9.3.3. Brain Areas Involved
- 9.3.4. Neurolinguistic Processes
- 9.3.5. Brain Centers Involved in Comprehension
- 9.3.6. Summary
- 9.3.7. Bibliographical References

9.4. Neuropsychology of Language Comprehension
- 9.4.1. Introduction
- 9.4.2. Brain Areas Involved in Comprehension
- 9.4.3. Sounds
- 9.4.4. Syntactic Structures for Linguistic Comprehension
- 9.4.5. Semantic Processes and Meaningful Learning
- 9.4.6. Reading Comprehension
- 9.4.7. Summary
- 9.4.8. Bibliographical References

9.5. Communication Through Language
- 9.5.1. Introduction
- 9.5.2. Language as a Tool for Communication
- 9.5.3. Evolution of Language
- 9.5.4. Social Communication
- 9.5.5. Summary
- 9.5.6. Bibliographical References

9.6. Language Disorders
- 9.6.1. Introduction
- 9.6.2. Speech and Language Disorders
- 9.6.3. Professionals Involved in the Treatment
- 9.6.4. Classroom Implications
- 9.6.5. Summary
- 9.6.6. Bibliographical References

9.7. Aphasia
- 9.7.1. Introduction
- 9.7.2. Types of Aphasia
- 9.7.3. Diagnosis
- 9.7.4. Evaluation
- 9.7.5. Summary
- 9.7.6. Bibliographical References

9.8. Language Stimulation
- 9.8.1. Introduction
- 9.8.2. Importance of Language Stimulation
- 9.8.3. Phonetic-Phonological Stimulation
- 9.8.4. Lexical-Semantic Stimulation
- 9.8.5. Morphosyntactic Stimulation
- 9.8.6. Pragmatic Stimulation
- 9.8.7. Summary
- 9.8.8. Bibliographical References

9.9. Reading and Writing Disorders
- 9.9.1. Introduction
- 9.9.2. Delayed Reading
- 9.9.3. Dyslexia
- 9.9.4. Dysorthographia
- 9.9.5. Dysgraphia
- 9.9.6. Dyslalia
- 9.9.7. Treatment of Reading and Writing Disorders
- 9.9.8. Summary
- 9.9.9. Bibliographical References

9.10. Evaluation and Diagnosis of Language Difficulties
- 9.10.1. Introduction
- 9.10.2. Language Evaluation
- 9.10.3. Language Assessment Procedures
- 9.10.4. Psychological Tests for Assessing Language
- 9.10.5. Summary
- 9.10.6. Bibliographical References

9.11. Intervention in Language Disorders
- 9.11.1. Introduction
- 9.11.2. Implementation of Improvement Programs
- 9.11.3. Improvement Programs
- 9.11.4. Improvement Programs Using New Technologies
- 9.11.5. Summary
- 9.11.6. Bibliographical References

9.12. Incidence of Language Difficulties on Academic Performance
- 9.12.1. Introduction
- 9.12.2. Linguistic Processes
- 9.12.3. Incidence of Language Disorders
- 9.12.4. Relationship Between Hearing and Language
- 9.12.5. Summary
- 9.12.6. Bibliographical References

9.13. Guidance for Parents and Teachers
- 9.13.1. Introduction
- 9.13.2. Language Stimulation
- 9.13.3. Reading Stimulation
- 9.13.4. Summary
- 9.13.5. Bibliographical References

## **Module 10.** Emerging Educational Alternatives in the Management of Learning Difficulties

10.1. Introduction

10.2. Information and Communication Technologies (ICTs)
- 10.2.1. Theoretical Fundamentals of ICT
- 10.2.2. Historical Development of ICT
- 10.2.3. Classification of ICT
  - 10.2.3.1. Synchronous
  - 10.2.3.2. Asynchronous
- 10.2.4. ICT Features
- 10.2.5. Potential of ICT in Different Contexts of Society

10.3. ICT in Educational Environments
- 10.3.1. Contribution of ICT to Education in General
  - 10.3.1.1. Tradition Education and ICT Incorporation
  - 10.3.1.2. Impact of ICT in 21st Century Education
  - 10.3.1.3. Learning and Teaching with ICT: Expectations, Realities and Potential
- 10.3.2. ICT Approaches in the Care of Learning Difficulties
  - 10.3.2.1. ICT as an Educational Resource for the Care of Learning Difficulties
    - 10.3.2.1.1. Teaching Reading
    - 10.3.2.1.2. Teaching Writing
    - 10.3.2.1.3. Teaching Mathematics
    - 10.3.2.1.4. Attention to Attention Deficit Hyperactivity Disorder (ADHD)
- 10.3.3. Role of the Teacher in the use of ICT
  - 10.3.3.1. In the Classroom
  - 10.3.3.2. Out-of-Classroom Spaces

10.4. Chess and its Pedagogical Value
- 10.4.1. Brief Historical Review of Chess
- 10.4.2. Its Playful Nature
- 10.4.3. Pedagogical Fundamentals of Play-Science
- 10.4.4. Chess as an Educational Tool: In the School Context and in Socially Vulnerable Environments
- 10.4.5. Potential of Chess in the Teaching-Learning Process of Students with Learning Difficulties
  - 10.4.5.1. Contributions of Chess in Cognitive Activity
    - 10.4.5.1.1. Attention
    - 10.4.5.1.2. Memory
    - 10.4.5.1.3. Motivation
    - 10.4.5.1.4. Managing Emotions
    - 10.4.5.1.5. Strategic Thinking
    - 10.4.5.1.6. Intelligence
    - 10.4.5.1.7. Transfer of Learning
  - 10.4.5.2. Contributions of Chess in the Context of Executive Functions
    - 10.4.5.2.1. Organisation
    - 10.4.5.2.2. Planning
    - 10.4.5.2.3. Execution (Planning, Inhibitory Control, Self-Monitoring)
    - 10.4.5.2.4. Evaluation / Review

10.5. Chess as a Binding Element of the School-Family-Community Triad in the Management of Learning Disabilities
- 10.5.1. Strengths in the Use of Chess in School to Promote Family Participation in the Educational Process
- 10.5.2. Possibilities Chess Offers to Promote Participation of the Community in Schools

10.6. Meditation: From Spiritual Practice to its Current Scope
- 10.6.1. A Brief Approach to Meditation as an Educational Tool
  - 10.6.1.1. Concept of Meditation
  - 10.6.1.2. Origin of Meditation
  - 10.6.1.3. Its Expansion into Different Fields

10.7. Educational Potential of Meditation to Manage Learning Difficulties and Attention to Diversity
- 10.7.1. Scientific Evidence of the Effects of Meditation on the Body, Brain and Interpersonal Relationships
  - 10.7.1.1. Neurological Effects: Structural, Biochemical and Functional in the Brain
  - 10.7.1.2. Psychological Effects
  - 10.7.1.3. Physical Effects
- 10.7.2. Impact of Meditation Practice in Schoolchildren
- 10.7.3. Impact of Meditation on Teacher's Modes of Action
- 10.7.4. Impact of Meditation Practice in School Environment

10.8. Activities for the Integration of Knowledge and its Practical Application

10.9. Recommending Readings

10.10. Bibliography

07

# Internship

After passing the online theoretical period, the program includes a practical internship in a reference educational center. Students will have at their disposal the support of a tutor who will accompany them throughout the process, both in the preparation and the development of the internship.

*Carry out your internship in one of the best educational centers globally"*

The internship period of this program will take place in a specialized educational center, offering an intensive 3-week stay. For five days a week, and with continuous 8-hour days, participants will be immersed in direct practical education, under the tutelage of recognized specialists. This experience will be a unique opportunity to work with real students, applying the latest pedagogical strategies and intervention programs.

The focus will be on the development and refinement of essential skills for the diagnosis and intervention of students with psychological disorders and learning disabilities. In addition, it is designed to provide specific qualification that guarantees a high quality professional practice, in a safe environment focused on the student's well-being.

This internship will allow the graduate to learn through practice in an innovative educational center that prioritizes personalized attention based on the specific needs of each student. These spaces represent an ecosystem where educational strategies and psychological intervention converge, constituting the fundamental core of professional work.

The practical part will be carried out with the active participation of the student performing the activities and procedures of each area of competence (learning to learn and learning to do), with the accompaniment and guidance of teachers and other training partners that facilitate teamwork and multidisciplinary integration as transversal competencies for the practice of neuropsychology (learning to be and learning to relate).

The procedures described below will be the basis of the practical part of the program, and their implementation will be subject to the center's own availability and workload, the proposed activities being the following:

*You will be qualified in an educational center that will offer you all the possibilities, through an innovative academic program"*

| Module | Practical Activity |
|---|---|
| Early Care Services | Intervene with children with developmental disorders from an early age |
| | Work on personal autonomy and participation in activities of daily living with children and adolescents |
| | Provide integration activities in the family, school and social environment |
| | Provide counseling on development stages to mothers and fathers |
| Voice and hearing rehabilitation | Treat people with neurological damage |
| | Work with therapies to address learning disabilities |
| | Use visual aids to supplement auditory rehabilitation |
| | Apply specific language development programs for hearing impairments |
| | Develop strategies to improve articulation and vocal clarity |
| | Provide counseling and emotional support services to cope with voice and hearing challenges |
| Diagnosis and psychological intervention | Diagnose and intervene in students with learning disorders and problems |
| | Perform all types of psychological tests and assessments |
| | Apply psychological tests: intelligence tests, high abilities, Personality Assessment Inventory (PAI), British Ability Scales (BAS), etc |
| | Create psycho-pedagogical reports for institutions and scholarships for students with special educational needs |
| Study techniques | Plan alternative study strategies for daily practice |
| | Implement techniques and resources to organize content in an optimal way |
| | Adapt educational material according to individual needs |
| | Implement study techniques for special educational needs cases |
| Teaching and therapy through play | Carry out cooperative games to promote social interaction |
| | Apply game strategies to improve cognitive skills |
| | Perform Role-playing to work on empathy and social skills |
| | Organize play activities to foster creativity and imagination |
| | Foster the use of games as a therapeutic tool to work on emotions and self-esteem |
| Technological resources for teaching | Implement computer-assisted learning programs |
| | Develop cognitive stimulation programs through digital games |
| | Manage educational platforms to adapt content and learning pace |
| | Use online communication tools for tutoring and support sessions |
| | Carry out multimedia projects to foster creativity |

## Civil Liability Insurance

This institution's main concern is to guarantee the safety of the trainees and other collaborating agents involved in the internship process at the company. Among the measures dedicated to achieve this is the response to any incident that may occur during the entire teaching-learning process.

To this end, this entity commits to purchasing a civil liability insurance policy to cover any eventuality that may arise during the course of the internship at the center.

This liability policy for interns will have broad coverage and will be taken out prior to the start of the practical training period. That way professionals will not have to worry in case of having to face an unexpected situation and will be covered until the end of the internship program at the center.

## General Conditions of the Internship Program

The general terms and conditions of the internship agreement for the program are as follows:

1. TUTOR: During the Hybrid Professional Master's Degree, students will be assigned with two tutors who will accompany them throughout the process, answering any doubts and questions that may arise. On the one hand, there will be a professional tutor belonging to the internship center who will have the purpose of guiding and supporting the student at all times. On the other hand, they will also be assigned with an academic tutor whose mission will be to coordinate and help the students during the whole process, solving doubts and facilitating everything they may need. In this way, the student will be accompanied and will be able to discuss any doubts that may arise, both clinical and academic.

2. DURATION: The internship program will have a duration of three continuous weeks, in 8-hour days, 5 days a week. The days of attendance and the schedule will be the responsibility of the center and the professional will be informed well in advance so that they can make the appropriate arrangements.

3. ABSENCE: If the students does not show up on the start date of the Hybrid Professional Master's Degree, they will lose the right to it, without the possibility of reimbursement or change of dates. Absence for more than two days from the internship, without justification or a medical reason, will result in the professional's withdrawal from the internship, therefore, automatic termination of the internship. Any problems that may arise during the course of the internship must be urgently reported to the academic tutor.

4. CERTIFICATION: Professionals who pass the Hybrid Professional Master's Degree will receive a certificate accrediting their stay at the center.

5. EMPLOYMENT RELATIONSHIP: The Hybrid Professional Master's Degree shall not constitute an employment relationship of any kind.

6. PRIOR EDUCATION: Some centers may require a certificate of prior education for the Hybrid Professional Master's Degree. In these cases, it will be necessary to submit it to the TECH internship department so that the assignment of the chosen center can be confirmed.

7. DOES NOT INCLUDE: The Hybrid Professional Master's Degree will not include any element not described in the present conditions. Therefore, it does not include accommodation, transportation to the city where the internship takes place, visas or any other items not listed

However, students may consult with their academic tutor for any questions or recommendations in this regard. The academic tutor will provide the student with all the necessary information to facilitate the procedures in any case.

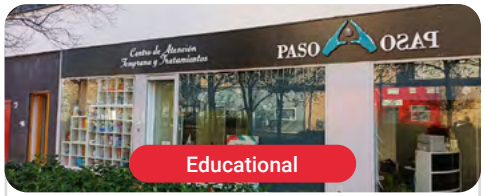
08

# Where Can I Do the Internship?

Within the program of this Hybrid Professional Master's Degree, a practical experience in a renowned educational center is included Here, students will apply the knowledge acquired in neuropsychology applied to education In order to make this program more accessible, TECH offers the possibility of completing it in different centers throughout your country. This opportunity will not only broaden the skills of professionals, but will also allow them to collaborate with leading experts, enriching their careers and fostering constant professional growth.

*You will spend your internship in a prestigious educational center, where you will put your knowledge into practice under the guidance of leading experts in the sector"*

The student will be able to complete the practical part of this Hybrid Professional Master's Degree at the following centers:




### Centro Paso a Paso

Country
Spain

City
Madrid

Address: Paseo de la Democracia 10 Portal 4 Bajo Entrada por Calle Rosalía de Castro (Peatonal, 28850 Torrejón de Ardoz, Madrid

Rehabilitation center specialized in health and early care services.

**Related internship programs:**
- Neuropsychology and Education
- Physiotherapy in Primary Care

*Delve into the most relevant theory in this field, subsequently applying it in a real work environment"*

09

# Methodology

This training program offers 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.

*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 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:**

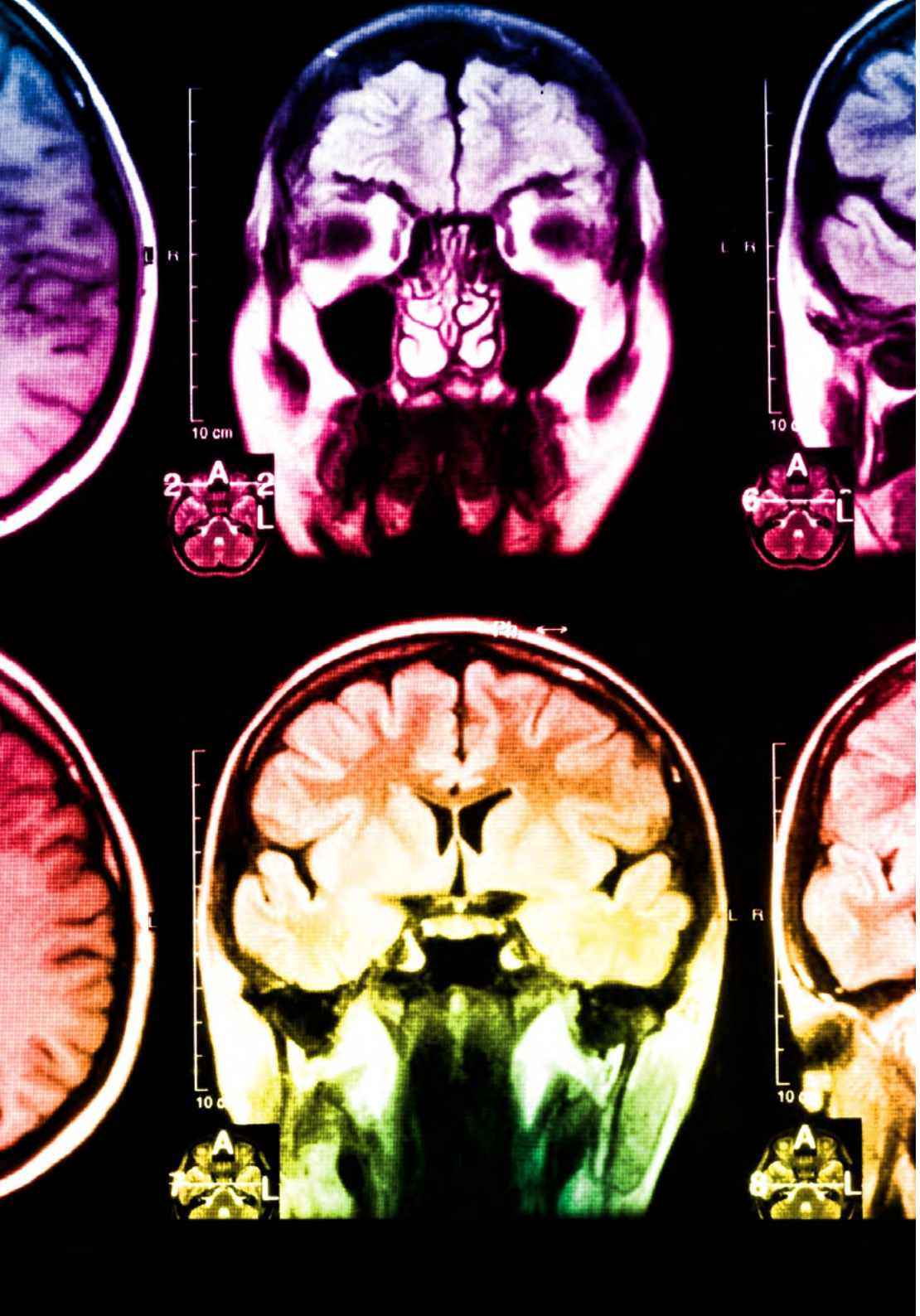
1. Educators who follow this method not only grasp concepts, but also develop their mental capacity, by evaluating real situations and applying their knowledge.
2. The learning process is solidly focused on practical skills that allow educators to better integrate the knowledge into daily practice.
3. 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.

## 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.*



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.

**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.

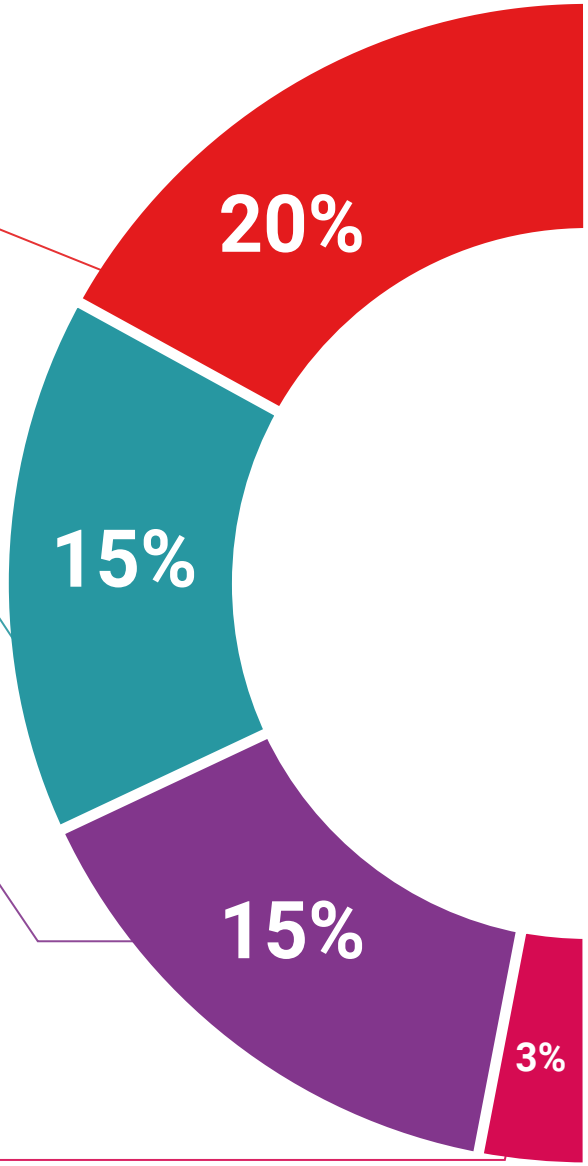
### Interactive Summaries

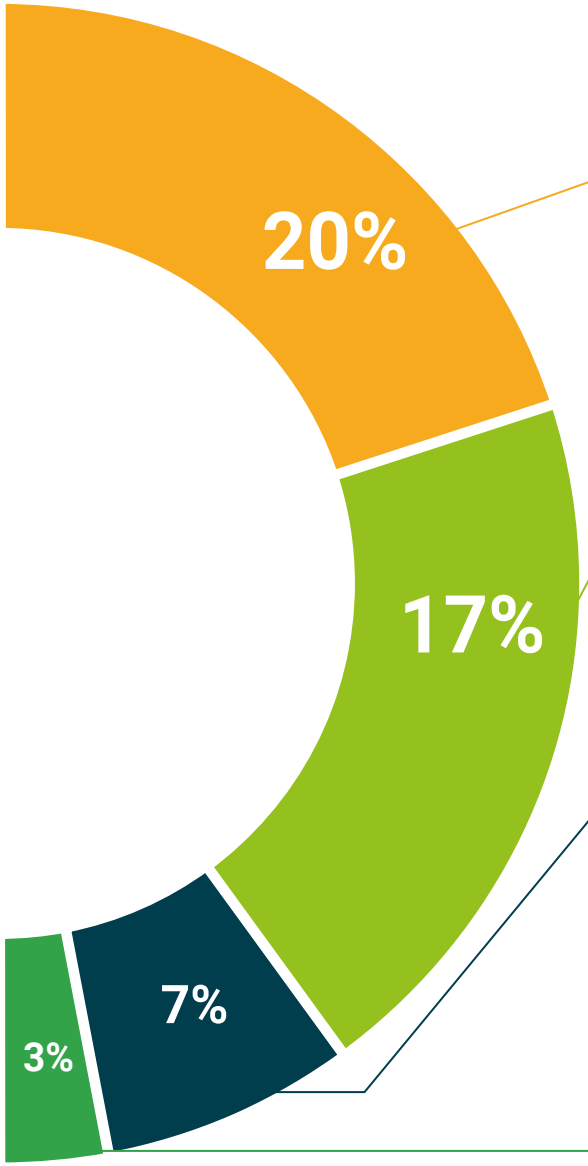
The TECH team presents the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

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.

10

# Certificate

This Hybrid Professional Master's Degree in Neuropsychology and Education guarantees students, in addition to the most rigorous and up-to-date education, access to a Hybrid Professional Master's Degree diploma issued by TECH Technological University.

*Successfully complete this program and receive your university qualification without having to travel or fill out laborious paperwork"*

This **Hybrid Professional Master's Degree in Neuropsychology and Education** contains the most complete and up-to-date program on the professional and educational field.

After the student has passed the assessments, they will receive their corresponding Hybrid Professional Master's Degree diploma issued by TECH Technological University via tracked delivery*

In addition to the certificate, students will be able to obtain an academic transcript, as well as a certificate outlining the contents of the program. In order to do so, students should contact their academic advisor, who will provide them with all the necessary information.

Title: **Hybrid Professional Master's Degree in Neuropsychology and Education**

Modality: **Hybrid (Online + Internship)**

Duration: **12 months**

Certificate: **TECH Technological University**

Teaching Hours: **1,620 h.**


tech technological university

Awards the following

CERTIFICATE

to

Mr./Ms. _____, with identification number _____.

For having successfully passed and accredited the following program

HYBRID PROFESSIONAL MASTER'S DEGREE

in

Neuropsychology and Education

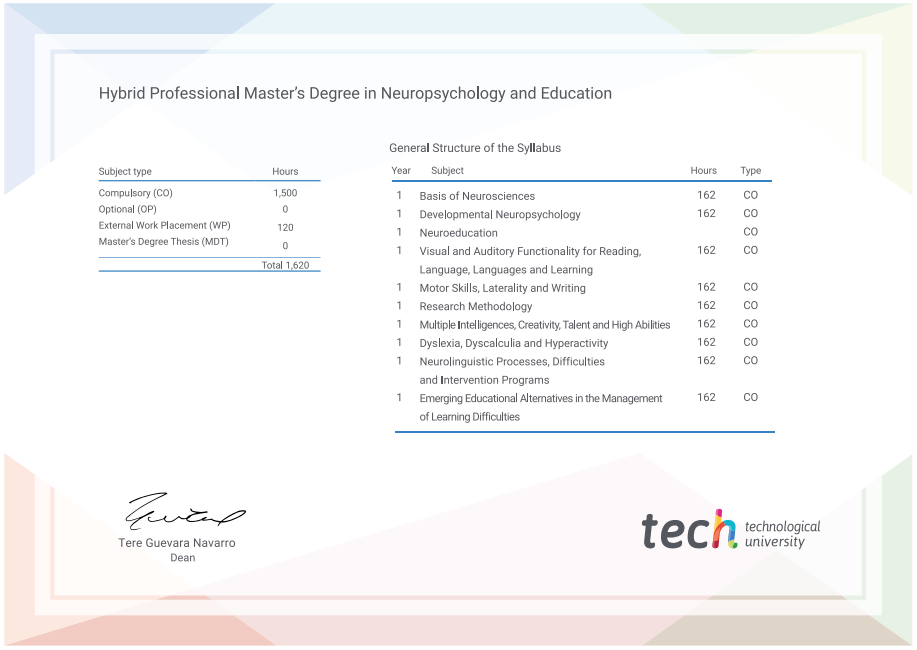
This is a qualification awarded by this University, with a duration of 1,620 hours, with a start date of dd/mm/yyyy and an end date of dd/mm/yyyy.

TECH is a Private Institution of Higher Education recognized by the Ministry of Public Education as of June 28, 2018.

June 17, 2020

Tere Guevara Navarro
Dean

Unique TECH Code: AFWORD23S techtitute.com/certificates


Hybrid Professional Master's Degree in Neuropsychology and Education

| Subject type | Hours |
|---|---|
| Compulsory (CO) | 1,500 |
| Optional (OP) | 0 |
| External Work Placement (WP) | 120 |
| Master's Degree Thesis (MDT) | 0 |
| | Total 1,620 |

General Structure of the Syllabus

| Year | Subject | Hours | Type |
|---|---|---|---|
| 1 | Basis of Neurosciences | 162 | CO |
| 1 | Developmental Neuropsychology | 162 | CO |
| 1 | Neuroeducation | | CO |
| 1 | Visual and Auditory Functionality for Reading, Language, Languages and Learning | 162 | CO |
| 1 | Motor Skills, Laterality and Writing | 162 | CO |
| 1 | Research Methodology | 162 | CO |
| 1 | Multiple Intelligences, Creativity, Talent and High Abilities | 162 | CO |
| 1 | Dyslexia, Dyscalculia and Hyperactivity | 162 | CO |
| 1 | Neurolinguistic Processes, Difficulties and Intervention Programs | 162 | CO |
| 1 | Emerging Educational Alternatives in the Management of Learning Difficulties | 162 | CO |

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*Apostille Convention. In the event that the student wishes to have their paper certificate issued with an apostille, TECH EDUCATION will make the necessary arrangements to obtain it, at an additional cost.

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# Hybrid Professional Master's Degree

## Neuropsychology and Education

Modality: **Hybrid (Online + Internship)**
Duration: **12 months**
Certificate: **TECH Technological University**
Teaching Hours: **1,620 h.**

# Hybrid Professional Master's Degree

## Neuropsychology and Education

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