

Advanced Master's Degree Clinical Neuropsychology and Neuroeducation





Advanced Master's Degree Clinical Neuropsychology and Neuroeducation

Course Modality: **Online**

Duration: **2 years**

Certificate: **TECH Technological University**

120 ECTS Credits

Teaching Hours: **3,000 hours.**

Website: www.techtitute.com/psychology/advanced-master-degree/advanced-master-degree-clinical-neuropsychology-neuroeducation

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01

Introduction

Knowing how the brain works is essential in the field of health, but also in the field of education. Thus, neuroeducation is one of the emerging sciences that is currently gaining more traction. This program in Clinical Neuropsychology and Neuroeducation aims to take the professional to a higher level of knowledge of the brain, applied to these two areas, which will allow him/her to perform quality interventions, according to each problem.



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In-depth knowledge of neurodevelopment in its multiple implications, in a Advanced Master's Degree, created to propel you to another professional level"

Neuropsychology is based on the natural scientific method to approach the study of the brain. Through the combination of the hypothetico-deductive and analytical-inductive methods, the professionals of this discipline develop the therapeutic intervention, both in individuals with congenital or supervening brain lesions, as well as in individuals without lesions.

This Advanced Master's Degree has two distinct and highly complementary areas of study. On the one hand, clinical neuropsychology and, on the other hand, neuroeducation. The objective of the first of these areas is to give the psychologist a mastery of the neurological and biochemical mechanisms that occur in mental illness and health. For its part, Neuropsychology in Education aims to train professionals in the brain aspects that influence education and learning.

The understanding of the chemical and anatomical structures involved in each of the processes within the field of health, and also of mental disorders, provides a global vision necessary for true mastery in the discernment of the human being, which joins the broad spectrum of intervention in specialization, to provide broad knowledge of the subject.

The relationship of brain biochemistry and limbic structures with basic emotions, as well as the impact on behavior and consciousness, are essential topics of this program. A Advanced Master's Degree hat is complemented by the functioning of memory, language, the relationship between laterality and cognitive development, sensoriality and many other aspects.

Throughout this specialization, the student will go through all the current approaches in the work of the neuropsychologist, in the different challenges that his/her profession presents. A high-level step that will become a process of improvement, not only on a professional level, but also on a personal level.

This challenge is one of TECH's social commitments: to help highly qualified professionals specialize and develop their personal, social and work skills during the course of their studies.

We will not only take you through the theoretical knowledge we offer, but we will introduce you to another way of studying and learning, one which is simpler, more organic and efficient. We will work to keep you motivated and to develop your passion for learning. We will push you to think and develop critical thinking.

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

- ◆ The latest technology in online teaching software
- ◆ A highly visual teaching system, supported by graphic and schematic contents that are easy to assimilate and understand
- ◆ Practical cases presented by practising experts
- ◆ State-of-the-art interactive video systems
- ◆ Teaching supported by telepractice
- ◆ Continuous updating and retraining systems
- ◆ Self-regulated learning: full compatibility with other occupations
- ◆ Practical exercises for self-evaluation and learning verification
- ◆ Support groups and educational synergies: questions to the expert, debate and knowledge forums
- ◆ Communication with the teacher and individual reflection work
- ◆ Content that is accessible from any fixed or portable device with an Internet connection
- ◆ Supplementary documentation databases are permanently available, even after the program



The basic processes of cognitive development, in relation to learning and school development, in an intensive and comprehensive specialization"

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A training program created for professionals who aspire to excellence that will allow you to acquire new skills and strategies in a smooth and effective way"

Our teaching staff is made up of working professionals. In this way, we ensure that we provide you with the training update we are aiming for. A multidisciplinary team of professors specialized and experience in different environments, who will develop the theoretical knowledge in an efficient way, but, above all, will bring their practical knowledge, derived from their own experience to the course: one of the differential qualities of this Advanced Master's Degree.

The efficiency of the methodological design of this Advanced master's degree, enhances the student's understanding of this Advanced Master's Degree. Developed by a multidisciplinary team of e-learning experts, it integrates the latest advances in educational technology. In this way, you will be able to study with a range of easy-to-use and versatile multimedia tools that will give you the necessary skills you need for your specialization.

The design of this program is based on Problem: Based Learning, an approach that conceives learning as a highly practical process. To achieve this remotely, we will use telepractice learning. With the help of an innovative interactive video system, and *learning from an expert*, you will be able to acquire the knowledge as if you were actually dealing with the scenario you are learning about. A concept that will allow you to integrate and fix learning in a more realistic and permanent way.

A deep and comprehensive dive into strategies and approaches in Clinical Neuropsychology and Neuroeducation.

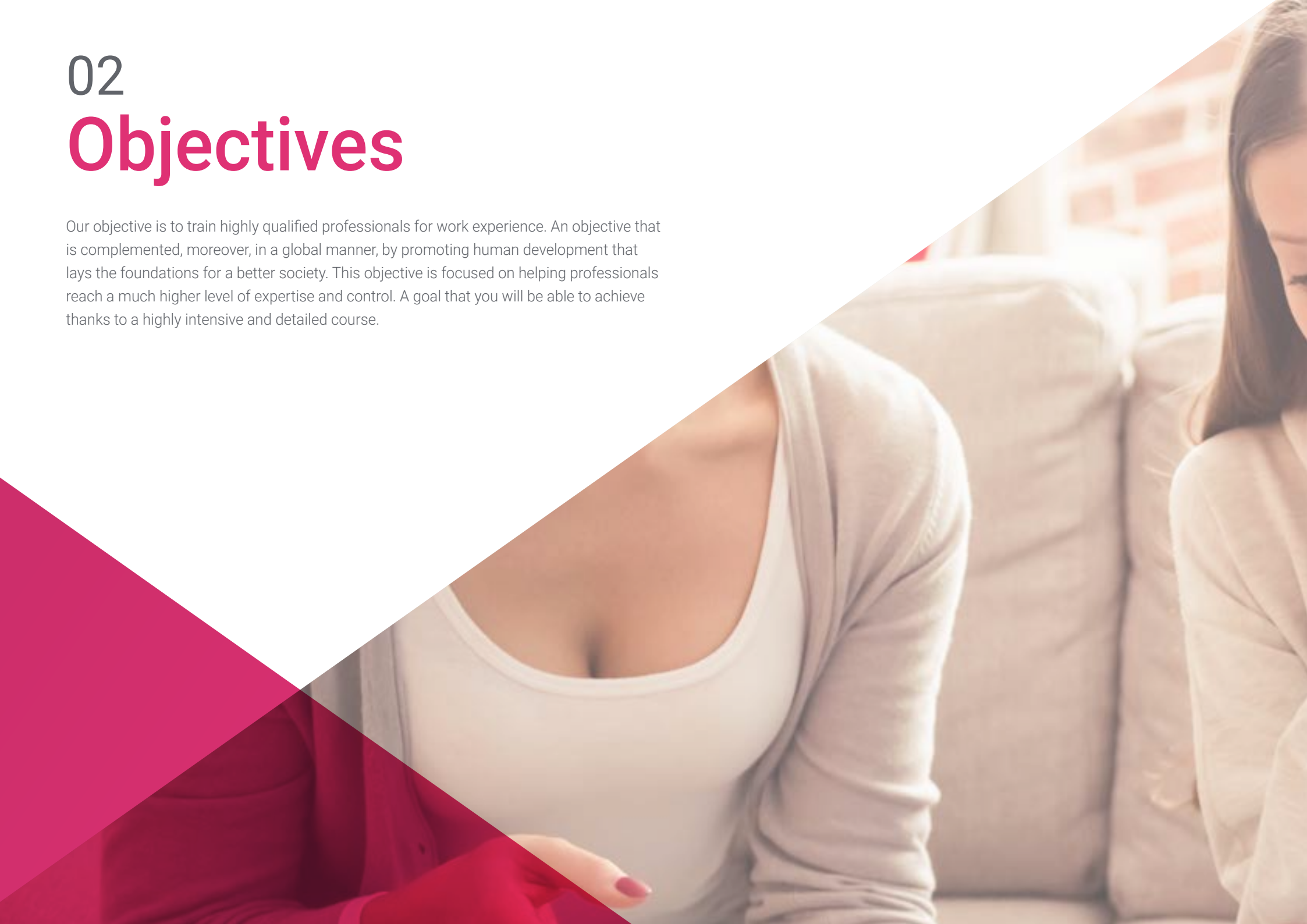
The sensory systems of the human being studied from the neuropsychologist's point of view, with a view to intervention and improvement.

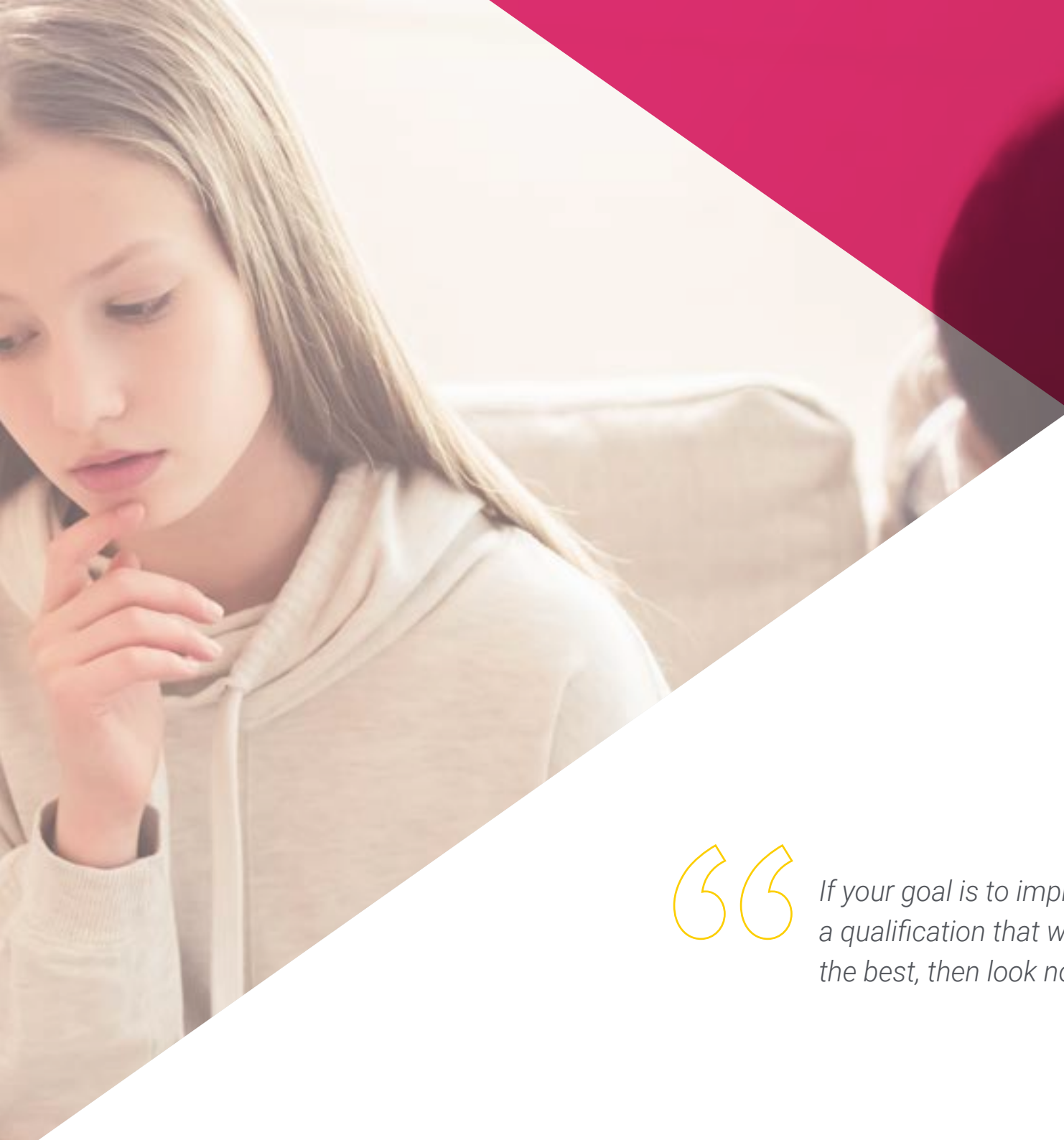


02

Objectives

Our objective is to train highly qualified professionals for work experience. An objective that is complemented, moreover, in a global manner, by promoting human development that lays the foundations for a better society. This objective is focused on helping professionals reach a much higher level of expertise and control. A goal that you will be able to achieve thanks to a highly intensive and detailed course.





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If your goal is to improve in your profession, to acquire a qualification that will enable you to compete among the best, then look no further: welcome to TECH”



General Objectives

- ♦ Describe the overall working of the brain and the biochemistry that activates or inhibits it
- ♦ Use brain activity as a map for mental health disorders
- ♦ Describe the brain-mind relationship
- ♦ Develop knowledge of the technology which can provoke changes in the brain in order to overcome mental illnesses
- ♦ Describe the most common neurological disorders in psychological behavior
- ♦ Describe the relationship between the central nervous system, the endocrine system and immune systems
- ♦ Understand current psychopharmacology and integrate this knowledge into psychological tools that can improve mental illness
- ♦ Qualify professionals for the practice of neuropsychology in education in the development of children and young people
- ♦ Learn how to carry out specific programs to improve school performance
- ♦ Access the forms and processes of research in neuropsychology in the school environment
- ♦ Increase the capacity for work and autonomous resolution of learning processes
- ♦ Study attention to diversity from the neuropsychological approach
- ♦ Learn about the different ways to implement enrichment systems for learning methodologies in the classroom, especially aimed at diverse students
- ♦ Analyze and integrate the knowledge necessary to foster students' school and social development





Specific Objectives

- ◆ 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
- ◆ 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
- ◆ Describe the biological principles of behavior
- ◆ Explain phylogeny from brain ontogeny
- ◆ Understand the neurological and biochemical framework in the overall view of human behavior
- ◆ Develop models which help us to understand mental health and mental illnesses from the perspective brain activity
- ◆ Describe biochemical activity and the specific anatomy involved in each mental health disorder
- ◆ Explain the biochemical antagonists and agonists of brain globalization
- ◆ Acquire in-depth knowledge of the treatment of mental health illnesses
- ◆ Gain an understanding of the psychological models which improve biochemical and anatomical imbalance

- ◆ Implement multidisciplinary intervention in mental disorders
- ◆ Explain the regulators in human behavior
- ◆ Present imaging tools in neurological research
- ◆ Learn about the latest scientific discoveries
- ◆ Describe the psychoneurological developments involved in health and disease
- ◆ List the different stages in the analysis of the stimulus
- ◆ Understand the biochemical and neurological drivers that lead to the establishment of a memory and its loss
- ◆ Develop psychic tools to change brain biochemistry and neuroanatomy
- ◆ Explain how basic emotions depend on biochemical and neuroanatomical activity
- ◆ Explain the involvement of respiration, body temperature and heart rate in illness and health
- ◆ Understand the ascending reticular system with psychic procedures
- ◆ Explain how psychosocial elements translate into brain activity and thus into disease intervention
- ◆ 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
- ◆ Learn about the characteristics and development of the organs of sight
- ◆ Learn about the risk factors
- ◆ Learn ways to detect, evaluate and intervene in the classroom and with students with eyesight problems
- ◆ Acquire the ability to work for the improvement of visual perception
- ◆ Become familiar with vision and reading skill training programs
- ◆ Study the saccadic models
- ◆ Learn about the characteristics and development of the organs of the ear
- ◆ Learn about the risk factors
- ◆ Learn ways to detect, evaluate and intervene in the classroom with students with hearing problems
- ◆ Acquire the ability to work for the improvement of hearing
- ◆ Learn 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
- ◆ Delve into the relationship between learning and neurodevelopment in the educational field
- ◆ Study aspects related to gross and fine psychomotor skills
- ◆ Learn about the relationship between motor skills and the psyche, and its implications in development
- ◆ 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 to intervene in possible difficulties related to learning in the classroom: dysgraphia, dyscalculia, dyslexia, etc.
- ◆ Develop intervention models for prevention, development and learning difficulties in the school environment
- ◆ Develop communication and relationship skills with fathers, mothers and families
- ◆ Identify successful educational responses, based on the analysis of cases of specific educational needs
- ◆ Learn about the intervention focused on the improvement of self-esteem and self-knowledge of the individual
- ◆ Analyze problem-solving strategies and their application

- ◆ Learn the dimensions of learning and its planning focused on individual treatment
 - ◆ Apply emotional management and social skills techniques oriented to educational practice
 - ◆ Propose strategies of accompaniment and intervention focused on families
 - ◆ Review strategies of emotional intelligence applied to educational intervention and the development of individual capabilities
 - ◆ Review educational intervention based on educational projects and diversity plans
 - ◆ 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
 - ◆ Learn the possibilities of working in the field of high capacities
 - ◆ Incorporate the necessary knowledge to detect and intervene in the classroom in cases of dyscalculia, dyslexia and ADHD
 - ◆ Understand the impact of comorbidity in this context
 - ◆ Learn about the possibilities of neurotechnology applied to dyslexia, ADHD and dyscalculia
 - ◆ Develop the neurobiological aspects involved in language development
 - ◆ Study the neuropsychological bases of language and the possibilities of language work and development
 - ◆ Analysis and knowledge of the processes of language comprehension, sounds and reading comprehension
 - ◆ Analysis of language and literacy disorders
 - ◆ Learn how to assess, diagnose and intervene in language difficulties
 - ◆ Explore and gain in-depth knowledge of the characteristics and functioning of memory processes, in relation to the global development of the person, in the specific field of learning
 - ◆ 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



Our goal is to help you achieve yours, through a very unique program of specialization that will become an unparalleled professional growth experience”

03 Skills

Once all the contents have been studied and the objectives of the Advanced Master's Degree in Clinical Neuropsychology and Neuroeducation have been achieved, the professional will have a superior skills and better performance in this area. A very complete approach, in a high-level master's degree, which makes the difference.





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Achieving excellence in any profession requires effort and perseverance. But, above all, the support of professionals, who will give you the boost you need, with the necessary means and assistance. At TECH, we offer you everything you need”

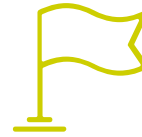


General Skills

- ◆ Develop within the profession in terms of working with other health professionals, acquiring skills to work as a team.
- ◆ Recognize the need to maintain your professional skills and, keep them up to date, with special emphasis on autonomous and continuous learning of new information
- ◆ Develop the capacity for critical analysis and research in your professional field
- ◆ Employing neuropsychology in the educational environment
- ◆ Conduct programs to improve school performance
- ◆ Apply the research methods of neuropsychology of education
- ◆ Construct new ways of attending to diversity in the classroom



Our objective is very simple: to offer you quality specialized training, with the best teaching methods currently, so that you can reach new heights of excellence in your profession"



Specific Skills

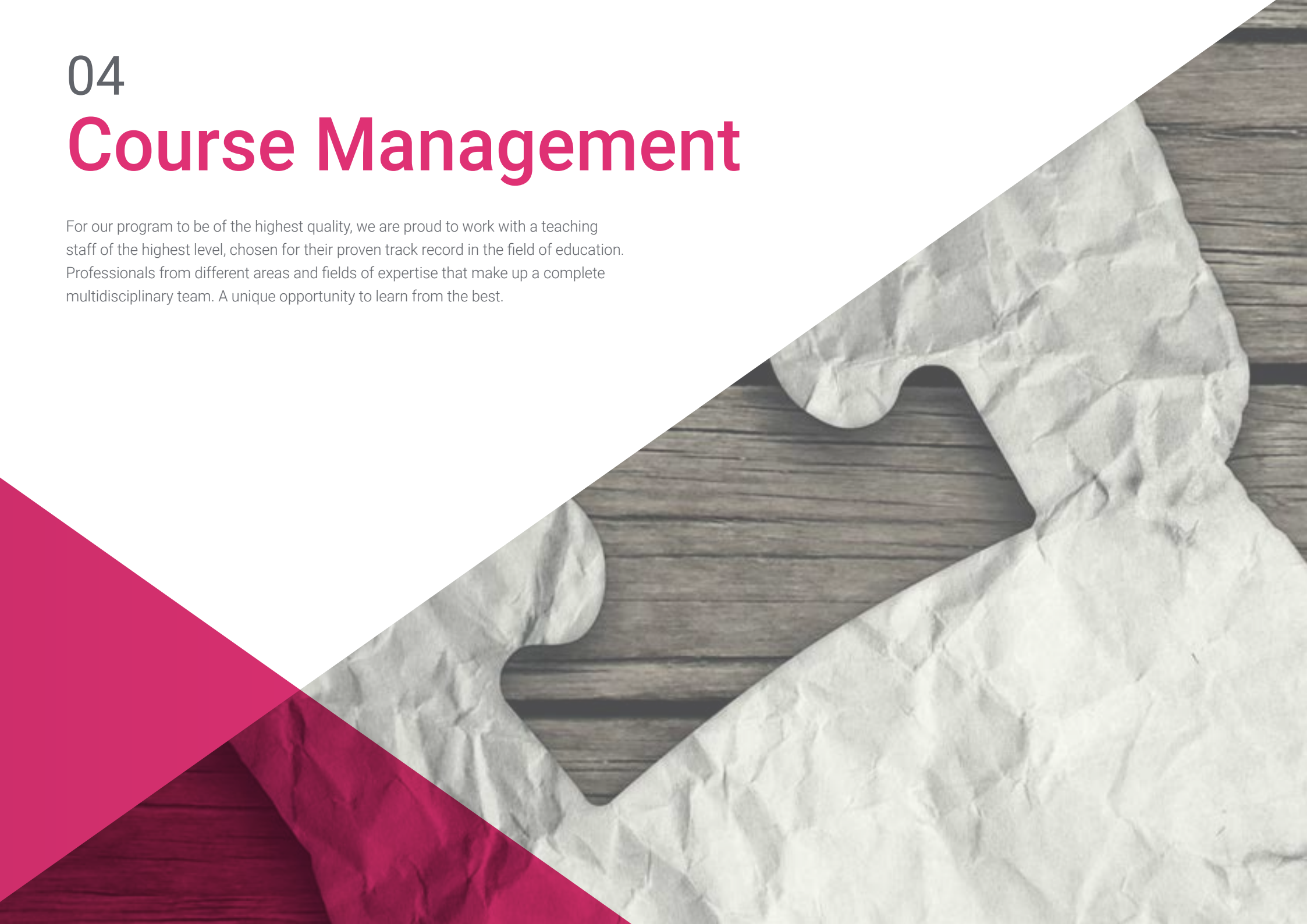
- ◆ Learn how the reptilian brain deals with basic, pattern and parameter intelligences
- ◆ Master the relationship between the limbic system and our emotional universe
- ◆ Have knowledge of the brain chemicals that affect our emotions
- ◆ Learn the neurological seat of our emotions
- ◆ Research intuition and its scientific and measurable side
- ◆ Learn about the unconscious mechanisms of emotional intelligence
- ◆ Determine from scientific knowledge that "emotion decides and reason justifies"
- ◆ Learn about the drivers of motivation in human beings
- ◆ Differentiate from the neurological reality the fact of thinking from the fact of reflecting
- ◆ Discover the evolutionary succession of our neocortex
- ◆ Have knowledge of the rational capacity to associate, represent in space and reflect
- ◆ Learn about the Alpha fibers and their function
- ◆ Learn about the Beta fibers and their function
- ◆ Learn about the Gamma fibers and their function
- ◆ Learn about the Delta fibers and their function
- ◆ Review and list sympathetic and preganglionic nerve fibers
- ◆ Learn how to differentiate mechano-receptors from other fibers
- ◆ Master the importance of sympathetic nociceptors in pain and sensitivity
- ◆ Learn the morphology and function of preganglionic fibers
- ◆ Discover the sympathetic and parasympathetic mechanisms

- ◆ Learn the functions and mechanisms of the spinal nerves
 - ◆ Learn how to differentiate between efferent and afferent communication
 - ◆ Learn the properties of the gray matter and its communication vehicle, white matter
 - ◆ Learn the functions of the Varolio Bridge
 - ◆ Learn how the medulla oblongata influences our global behavioral system
 - ◆ Understand the description and function of the cerebellum
 - ◆ Master the global role of the amygdalae, hippocampus, hypothalamus, cingulum, sensory thalamus, basal nuclei, periaqueductal gray region, pituitary gland and nucleus accumbens
 - ◆ Learn about R Carter's theory of brain evolution in 2002
 - ◆ Manage the global role of the orbital frontal lobe
 - ◆ Linking neuromotor transmission and sensory perception
 - ◆ Gain knowledge of the hypothalamic axis and the endocrine system
 - ◆ Understand the neurological mechanisms and chemistries that regulate temperature, blood pressure, food intake, and reproductive function
 - ◆ Assimilate the latest knowledge on the relationship between the nervous system and the immune system
 - ◆ 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
 - ◆ Use the knowledge of neuropsychology in the development of diverse intervention programs in all fields of school development
 - ◆ Apply the data extracted from the analysis of neurology in clinical diagnosis, supported by specific knowledge of developmental neuropsychology
- ◆ Put into practice the different forms of intervention in the educational area based on the data extracted from the analysis of brain functionality in the field of emotions and learning
 - ◆ Work with sensory difficulties in the school environment, from a neuropsychological approach based on the work, from the 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 capacities
 - ◆ Being able to program taking into account multiple intelligences and fostering talent and creativity
 - ◆ Develop efficient intervention programs for students with dyscalculia, dyslexia and hyperactivity
 - ◆ Perform effective assessment, diagnosis and intervention of language difficulties

04

Course Management

For our program to be of the highest quality, we are proud to work with a teaching staff of the highest level, chosen for their proven track record in the field of education. Professionals from different areas and fields of expertise that make up a complete multidisciplinary team. A unique opportunity to learn from the best.



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Our professors bring their vast experience and their teaching skills to offer you a stimulating and creative specialized training program”

Management



Dr. Martínez Lorca, Alberto

- ◆ Specialist in Nuclear Medicine. Rey Juan Carlos-Quirón University Hospital. Madrid, Spain



Sánchez Padrón, Nuria Ester

- ◆ Degree in Psychology from the University of La Laguna
- ◆ Master's Degree in General Health Psychology from the University of La Rioja
- ◆ Training in Emergency Psychological Care
- ◆ Training in Psychological Care in Penitentiary Institutions
- ◆ Teaching and training experience
- ◆ Experience in educational attention to children at risk

Coordination



Dr. Aguado Romo, Roberto

- ◆ Psychologist specialized in clinical psychology
- ◆ European specialist psychologist in psychotherapy
- ◆ Managing Director of evaluation and psychotherapy centers in Madrid, Bilbao, and Talavera de la Reina
- ◆ Author of Time-Limited Psychotherapy
- ◆ Researcher at CerNet, Emotional Network, and European Institute for Time-Limited Psychotherapies

Professors

Dr. Fernandez, Angel

- ◆ European specialist psychologist in Psychotherapy from the EFPA
- ◆ Health Psychologist. Master's Degree in Clinical and Health Psychology
- ◆ Director of the Evaluation and Psychotherapy Center of Madrid
- ◆ Tutor in charge of the Psychodiagnosis and Psychological Intervention area of the CEP
- ◆ Author of the T.E.N. technique
- ◆ Head of studies on the Master's Degree in Time-Limited Psychotherapy and Health Psychology
- ◆ Specialist in Clinical Hypnosis and Relaxation

Dr. González Iñiguez, Mónica

- ◆ Psychologist in charge of the Department of Child and Adolescent Psychology in the Quirón Hospital and Avatar Psychologists in Marbella.
- ◆ Master's degree in Time-Limited Psychotherapy and Health Psychology by the European Institute of Time-Limited Psychotherapy.

Dr. Kaiser, Carlos

- ◆ Otolaryngology medical specialist
- ◆ Head of the Otolaryngology department at Segovia General Hospital.
- ◆ Member of the Royal Academy of Medicine of Salamanca
- ◆ Master's Degree in Time-Limited Psychotherapy and Health Psychology
- ◆ Expert in Psychosomatic Medicine





Dr. Martínez-Lorca, Manuela

- ◆ Doctorate in Psychology from the University of Castilla-La Mancha
- ◆ Health Psychologist.
- ◆ Lecturer in the Department of Psychology at the UCLM
- ◆ Master's Degree in Time-Limited Psychotherapy and Health Psychology by the European Institute of Time-Limited Psychotherapy
- ◆ Specialist in Clinical Hypnosis and Relaxation

Dr. Roldan, Lucía

- ◆ Health Psychologist
- ◆ Cognitive-behavioral intervention specialist
- ◆ Master's Degree in Time-Limited Psychotherapy and Health Psychology
- ◆ Expert in energy therapy intervention

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Learning that draws on the real-world experience of practicing professionals. Learning is the best way to achieve quality in your profession”

05

Structure and Content

The contents of this specialisation have been developed by the different teachers of this program, with a clear purpose: to ensure that our students acquire each and every one of the necessary skills to become true experts in this field. The content of this Advanced Master's Degree enables you to learn all aspects of the different disciplines involved in this field. A complete and well-structured program that will take you to the highest standards of quality and success.



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Through a very well segmented approach, you will be able to access the most advanced knowledge in Clinical Neuropsychology and Neuroeducation of the moment”

Module 1. The Foundations of Neurosciences

- 1.1. The Nervous System and Neurons
 - 1.1.1. Introduction
 - 1.1.2. Developments 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 Function
 - 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. The 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 Brain
 - 1.8.1. Brain Development in Infancy
 - 1.8.2. Characteristics
- 1.9. The Evolution of the Adolescent Brain
 - 1.9.1. Brain Development in Adolescence
 - 1.9.2. Characteristics
- 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. Neurobiological Basis of Development
 - 2.1.1. Introduction
 - 2.1.2. Developmental Neurobiology
- 2.2. Differential Cognitive Functioning
 - 2.2.1. Definition
 - 2.2.2. Description
- 2.3. Metacognitive Regulation
 - 2.3.1. Definition
 - 2.3.2. Development and Intervention
- 2.4. Endophenotypes or Neurobiological Markers
 - 2.4.1. Definition
 - 2.4.2. Characteristics and Epistemology
- 2.5. Contributions to Clinical Diagnosis
 - 2.5.1. Applicable Developments
- 2.6. Neuroeducation Applications
 - 2.6.1. Plasticity and Brain Development
 - 2.6.1.1. Critical Periods
 - 2.6.1.2. Sensitive Periods
 - 2.6.2. Cerebral Learning Models
 - 2.6.3. Cognitive Processing and Learning
 - 2.6.3.1. Perception
 - 2.6.3.2. Attention
 - 2.6.3.3. Operative Memory
 - 2.6.3.4. Reasoning
 - 2.6.3.5. Language and Brain
 - 2.6.3.6. Bilingualism and Brain Development
 - 2.6.3.7. Neurolinguistic Programming NLP
 - 2.6.3.8. Literacy
 - 2.6.4. Maturation of the Prefrontal Cortex
 - 2.6.5. Psychomotor
 - 2.6.6. Emotions and Learning

Module 3. Principles of Neuroanatomy

- 3.1. Classification of Nerve Fibers (Erlanger and Gasser)
 - 3.1.1. Alpha
 - 3.1.2. Beta
 - 3.1.3. Gamma
 - 3.1.4. Delta
 - 3.1.5. Sympathetic
 - 3.1.6. Preganglionic
 - 3.1.7. Mechano-receptors
 - 3.1.8. Sympathetic Nociceptors
 - 3.1.9. Preganglionic
- 3.2. Vegetative Nervous System
- 3.3. Spinal Cord
- 3.4. Spinal Nerves
- 3.5. Afferent and Efferent Communication
- 3.6. Gray Matter
- 3.7. White Matter
- 3.8. Brainstem
 - 3.8.1. Midbrain
 - 3.8.2. Varolio Bridge
 - 3.8.3. Medulla Oblongata
 - 3.8.4. Cerebellum
- 3.9. Limbic System
 - 3.9.1. Tonsils
 - 3.9.2. Hippocampus
 - 3.9.3. Hypothalamus
 - 3.9.4. Cingulum
 - 3.9.5. Sensory Thalamus
 - 3.9.6. Base Cores
 - 3.9.7. Periaqueductal Gray Region
 - 3.9.8. Pituitary
 - 3.9.9. Nucleus Accumbens

- 3.10. Cerebral Cortex (Theory of Cerebral Evolution, Carter 2002)
 - 3.10.1. Parietal Cortex
 - 3.10.2. Frontal Lobes (6m)
 - 3.10.3. Limbic System (12 m)
 - 3.10.4. Language Areas: 1st Wernicke, 2nd Broca. (18 m)
- 3.11. Frontal Orbital Lobe
- 3.12. Functional Relationships of the NS with Other Organs and Systems
- 3.13. Motorneurone Transmission
- 3.14. Sensoperception
- 3.15. Neuroendocrinology (Hypothalamus-Endocrine System Relationship)
 - 3.15.1. Temperature Regulation
 - 3.15.2. Blood Pressure Regulation
 - 3.15.3. Food Ingestion Regulation
 - 3.15.4. Reproductive Function Regulation
- 3.16. Neuroimmunology (Relationship between the Nervous System and Immune System)
- 3.17. Map Relating Emotion to Neuroanatomical Structures

Module 4. Principles of Cerebral Biochemistry

- 4.1. The Neurone and its Composition
 - 4.1.1. Axon
 - 4.1.2. Cellular Body or Soma
 - 4.1.3. Dendrites
- 4.2. Nervous Impulse
 - 4.2.1. Sodium / Potassium Pump
 - 4.2.2. Resting Potential
 - 4.2.3. Action Potential Generation
 - 4.2.4. GABA-Glutamate-Glutamine Cycle
- 4.3. Electric and Chemical Synapses
- 4.4. Neurotransmitters
 - 4.4.1. G.A.B.A.
 - 4.4.2. Acetylcholine. (Ach)

- 4.4.3. Catecholamines
 - 4.4.3.1. Adrenaline (A)
 - 4.4.3.2. Noradrenaline (NA)
 - 4.4.3.3. Dopamine (DA)
 - 4.4.3.3.1. DAe
 - 4.4.3.3.2. DAi
 - 4.4.4. Indolamines
 - 4.4.4.1. Serotonin (5-HT)
 - 4.4.5. Gastrointestinal Polypeptides
 - 4.4.6. Prostaglandins
 - 4.4.7. Glycerine
 - 4.4.8. Enkephalins and Endorphins
 - 4.4.9. Adenylate Cyclase (ATP)
- 4.5. Neurotransmission Process
 - 4.6. Neurotransmitter Synthesis
 - 4.7. Neurotransmitter Storage
 - 4.8. Release into the Intersynaptic Space
 - 4.9. Interaction with the Postsynaptic Receptor
 - 4.10. Neurotransmitter Reuptake
 - 4.11. General Circulation Diffusion
 - 4.12. Inactivation by the M.A.O
 - 4.13. Rivers of Chemistry Flooding our Brains
 - 4.14. Chemical Families and Interactions Between Them
 - 4.15. Hormonal System
 - 4.15.1. Adrenaline
 - 4.15.2. Melatonin
 - 4.15.3. Adrenocorticotropin
 - 4.15.4. Norepinephrine

Module 5. Biochemistry of Mental Disorders.

- 5.1. Neurotransmitters and Mental Illness
 - 5.1.1. Upper Stratum (NA / 5-HT) Own Anxiety, Stress
 - 5.1.2. Lower Stratum (DA / Ach) Own Helplessness, Depression
- 5.2. NA-Type Biochemical Imbalance
 - 5.2.1. Clinical Hypomania
 - 5.2.2. Clinical Psychopathy
 - 5.2.3. Clinical Psychosis
 - 5.2.4. Clinical Anxiety
 - 5.2.5. Clinical Loss of Impulse Control
- 5.3. Clinical Depression
- 5.4. Clinical Immunological Depression
- 5.5. Clinical Mania
- 5.6. Clinical Schizophrenia
- 5.7. Clinical Sleep Disorders
- 5.8. Clinical Impulse Control Disorders
- 5.9. Clinical Eating Disorders
- 5.10. Type Ach Biochemical Imbalance
 - 5.10.1. Complex Arterial Hypotension, Hypoglycemia, Bradycardia and Muscular Asthenia
 - 5.10.2. Physical and Psychological Exhaustion
 - 5.10.3. Attention and Memory Disorders
 - 5.10.4. Neurological Diseases Affecting the Locomotor System
 - 5.10.5. Clinical Affective Blunting and Consciousness Disorder
- 5.11. Type DAe Biochemical Imbalance
 - 5.11.1. Calm, Serenity Suppressing Irritability Complex
 - 5.11.2. Insomnia
 - 5.11.3. Ill-tempered, Without Expressing it
- 5.12. Type DAi Biochemical Imbalance
 - 5.12.1. Motor Hyperactivity
 - 5.12.2. Complex Tachycardia, Hypertension and Hyperglycemia
 - 5.12.3. Histrionic Spectrum Disorders with Anxious Depression

Module 6. Neuroanatomy and Mental Disorders.

- 6.1. Relationship of Brain Chemistry and Neurological Activation
- 6.2. Reticular System and Mental Illness
 - 6.2.1. Neurotransmission Activator
 - 6.2.2. Conscious State Activator
 - 6.2.3. Sleep-Wake Cycle Activator
 - 6.2.4. Learning Activator
- 6.3. Brainstem
 - 6.3.1. Substantia Nigra
 - 6.3.2. Base Nodes
 - 6.3.3. Locus Coeruleus
 - 6.3.4. Rafe
- 6.4. Limbic Structures Involved in Mental Disorders
 - 6.4.1. Tonsils
 - 6.4.2. Periaqueductal Gray Region
 - 6.4.3. Hypothalamus
 - 6.4.4. Caudate Nucleus
 - 6.4.5. Putamen
 - 6.4.6. Cingular Area
 - 6.4.7. Ventral Tegmental Area
 - 6.4.8. Nucleus Accumbens
 - 6.4.9. Sensory Thalamus
- 6.5. Corpus Callosum
- 6.6. Cortical Structures
 - 6.6.1. Pre-optical Area
 - 6.6.2. Insula
 - 6.6.3. Association Areas
 - 6.6.4. Brodmann Areas
 - 6.6.5. Werckicke Area
 - 6.6.6. Broca Area
 - 6.6.7. Limbic Association Area
- 6.7. Frontal Orbital Lobe

Module 7. Biochemistry and Neuroanatomy of the Most Well-Known Mental Disorders in the Practitioner's Outpatient Clinic of Psychology

- 7.1. Neuroanatomy and Biochemistry in Consciousness and Memory Disorders
 - 7.1.1. Hypervigilance, Obnubilation, Confusional or Twilight States
 - 7.1.2. Depersonalization or Derealization Disorders
 - 7.1.3. Remote or Immediate Memory Disorders
 - 7.1.4. Clinical Disorientation, Drowsiness
 - 7.1.5. Obnubilation, Stupor, Delirium, Coma, Twilight State
 - 7.1.6. Clinical Agnosia, Anosognosia, Apraxia, Adiadochokinesia
 - 7.1.7. Memory Disorders: Amnesia, Paramnesia, Amnesic Screen, Lethologic
- 7.2. Neuroanatomy and Biochemistry of Anxiety Disorders
 - 7.2.1. Panic Attacks
 - 7.2.2. Agoraphobia
 - 7.2.3. Simple Phobia
 - 7.2.4. Generalized Anxiety Disorder
 - 7.2.5. Obsessive Compulsive Disorder
 - 7.2.6. Social Phobia
 - 7.2.7. Post-Traumatic Stress Disorder.
- 7.3. Neuroanatomy and Biochemistry of Mood Disorders
 - 7.3.1. Dysthymia
 - 7.3.2. Severe Depression
 - 7.3.3. Adaptive Deficit Disorders
- 7.4. Neuroanatomy and Biochemistry of Eating Disorders
 - 7.4.1. Pica.
 - 7.4.2. Rumination Disorder
 - 7.4.3. Anorexia Nervosa
 - 7.4.4. Bulimia Nervosa
 - 7.4.5. Binge Eating Disorder
- 7.5. Neuroanatomy and Biochemistry of Impulse Control Disorders
 - 7.5.1. Oppositional Defiant Disorder
 - 7.5.2. Intermittent Explosive Disorder
 - 7.5.3. Antisocial Personality Disorder
 - 7.5.4. Behavioral Disorders
 - 7.5.5. Kleptomania
 - 7.5.6. Pyromania
- 7.6. Neuroanatomy and Biochemistry of Sleep Disorders
 - 7.6.1. Insomnia
 - 7.6.2. Hypersomnia
 - 7.6.3. Narcolepsy
 - 7.6.4. Apnea
 - 7.6.5. Circadian Rhythm Disorders
 - 7.6.6. Restless Leg Syndrome
- 7.7. Neuroanatomy and Biochemistry of Personality Disorders
 - 7.7.1. Borderline Personality Disorder
 - 7.7.2. Schizophrenic Personality Disorder
 - 7.7.3. Avoidant Personality Disorder
 - 7.7.4. Narcissistic Personality Disorder
 - 7.7.5. Obsessive Compulsive Personality Disorder
- 7.8. Neuroanatomy and Biochemistry of Psychotic Disorders
 - 7.8.1. Schizophrenia.
 - 7.8.2. Delirious Disorders
 - 7.8.3. Bipolar Disorder
 - 7.8.4. Psychotic Disorder

Module 8. Neurological Behavioral Sites

- 8.1. Reticular System
 - 8.1.1. Parts
 - 8.1.2. Functions
- 8.2. Brainstem
 - 8.2.1. Cerebral Biochemistry
 - 8.2.2. Influence of Biochemistry on Musculature
- 8.3. Activation of Limbic Structures
 - 8.3.1. Action Platform
 - 8.3.2. Motivation
- 8.4. Sensation Felt
 - 8.4.1. Emotion
 - 8.4.2. Basic Emotions
- 8.5. Precortical Structures
 - 8.5.1. Feelings
 - 8.5.2. Unconscious Thought
 - 8.5.3. Fantasy
- 8.6. Cortical Structures
 - 8.6.1. Motor Activity
 - 8.6.2. Sensory
- 8.7. Frontal Orbital Lobe
 - 8.7.1. Reflection
 - 8.7.2. Implementation
 - 8.7.3. Planning

Module 9. Neurological Foundations of Behavior

- 9.1. Philosophical Tradition: Monism, Dualism and Integrationism
- 9.2. Monism from Spinoza to Donald Davidson
- 9.3. Descartes' Dualism
- 9.4. Behavior as a Function of the Nervous System
- 9.5. Organization of the Nervous System
- 9.6. Anatomy
 - 9.6.1. Central Nervous System vs. Peripheral Nervous System
 - 9.6.2. Motor Nervous System vs. Vegetative System
 - 9.6.3. Spinal Cord
 - 9.6.4. Brainstem
 - 9.6.5. Brain
- 9.7. Functional Activity
 - 9.7.1. Lower
 - 9.7.2. Upper
- 9.8. Microstructure
 - 9.8.1. Neurons
 - 9.8.2. Other Cells
- 9.9. Embryology of the Nervous System
- 9.10. Spinal Cord
- 9.11. Brainstem
- 9.12. Cerebellum
- 9.13. Midbrain, Forebrain and Diencephalon
- 9.14. Subcortex
- 9.15. Basal Ganglia
- 9.16. Frontal Orbital Lobe
- 9.17. Process of Vascularization and Myelination of the Nervous System
 - 9.17.1. Reptilian Brain
 - 9.17.2. Basic Intelligence
 - 9.17.3. Intelligence Patterns
 - 9.17.4. Parameter Intelligence
- 9.18. Limbic Brain and the Chemistry of Basic Emotions

Module 10. Neuroeducation

- 10.1. Introduction to Neuroeducation
- 10.2. The Main Neuromyths
- 10.3. Attention
- 10.4. Emotion
- 10.5. Motivation
- 10.6. Learning
- 10.7. Memory
- 10.8. Stimulation and Early Interventions
- 10.9. The Importance of Creativity in Neuroeducation
- 10.10. The Methodologies that Allow the Transformation of Education in Neuroeducation

Module 11. Visual and Auditory Functionality for Reading, Language, Languages and Learning

- 11.1. Vision: Functioning and Neuropsychological Bases
 - 11.1.1. Introduction
 - 11.1.2. Development of the Visual System at Birth
 - 11.1.3. Risk Factors
 - 11.1.4. Development of Other Sensory Systems During Infancy
 - 11.1.5. Influence of Vision on the Visuomotor System and its Development
 - 11.1.6. Normal and Binocular Vision
 - 11.1.7. Anatomy of Human Eyes
 - 11.1.8. Eye Functions
 - 11.1.9. Other Functions
 - 11.1.10. Visual Pathways to the Cerebral Cortex
 - 11.1.11. Elements that Favor Visual Perception
 - 11.1.12. Diseases and Alterations of the Vision
 - 11.1.13. Most Common Eye Disorders or Diseases Classroom Interventions
 - 11.1.14. Computer Vision Syndrome (CVS)
 - 11.1.15. Attitudinal Observation of the Student
 - 11.1.16. Summary
 - 11.1.17. Bibliographic References
- 11.2. Visual Perception, Assessment and Intervention Programs
 - 11.2.1. Introduction
 - 11.2.2. Human Development: Development of the Sensory Systems
 - 11.2.3. Sensory Perception
 - 11.2.4. Neurodevelopment
 - 11.2.5. Description of the Perceptual Process
 - 11.2.6. Color Perception
 - 11.2.7. Perception and Visual Skills
 - 11.2.8. Evaluation of Visual Perception
 - 11.2.9. Intervention for the Improvement of Visual Perception
 - 11.2.10. Summary
 - 11.2.11. Bibliographic References
- 11.3. Tracking Eye Movements
 - 11.3.1. Introduction
 - 11.3.2. Eye Movements
 - 11.3.3. Tracking Eye Movements
 - 11.3.4. Ocular Motility Recording and Assessment
 - 11.3.5. Ocular Motility-Related Disorders
 - 11.3.6. The Visual System and Reading
 - 11.3.7. Development of Skills in Learning to Read
 - 11.3.8. Improvement and Training Programs and Activities
 - 11.3.9. Summary
 - 11.3.10. Bibliographic References
- 11.4. Saccadic Movements and Their Implication in Reading
 - 11.4.1. Introduction
 - 11.4.2. Models of the Reading Process
 - 11.4.3. Saccadic Movements and Their Relation to Reading
 - 11.4.4. How are Saccadic Movements Evaluated?
 - 11.4.5. The Reading Process at the Visual Level
 - 11.4.6. Visual Memory in the Reading Process
 - 11.4.7. Investigations to Study the Relationship Between Visual Memory and Reading
 - 11.4.8. Reading Difficulties
 - 11.4.9. Specialized Teachers

- 11.4.10. Social Educators
- 11.4.11. Summary
- 11.4.12. Bibliographic References
- 11.5. Visual Accommodation and its Relation to Posture in the Classroom
 - 11.5.1. Introduction
 - 11.5.2. Mechanisms that Allow for Accommodation or Focus
 - 11.5.3. How is Visual Accommodation Assessed?
 - 11.5.4. Body Posture in the Classroom
 - 11.5.5. Visual Accommodation Training Programs
 - 11.5.6. Aids for Visually Impaired Students
 - 11.5.7. Summary
 - 11.5.8. Bibliographic References
- 11.6. Structure and Function of the Ear
 - 11.6.1. Introduction
 - 11.6.2. The World of Sound
 - 11.6.3. Sound and its Propagation
 - 11.6.4. The Auditory Receptors
 - 11.6.5. Ear Structure
 - 11.6.6. Development of the Hearing System at Birth
 - 11.6.7. Development of Sensory Systems During Infancy
 - 11.6.8. Influence of the Ear on Balance Development
 - 11.6.9. Ear Diseases
 - 11.6.10. Summary
 - 11.6.11. Bibliographic References
- 11.7. Auditory Perception
 - 11.7.1. Introduction
 - 11.7.2. Guidelines for Detecting Auditory Perception Problems
 - 11.7.3. The Perceptive Process
 - 11.7.4. Role of the Auditory Pathways in Perceptual Processes
 - 11.7.5. Children with Impaired Auditory Perception
 - 11.7.6. Evaluation Tests
 - 11.7.7. Summary
 - 11.7.8. Bibliographic References
- 11.8. Evaluation of Hearing and its Alterations
 - 11.8.1. Introduction
 - 11.8.2. Evaluation of the External Auditory Canal
 - 11.8.3. Otoscopy
 - 11.8.4. Air Audiometry
 - 11.8.5. Bone Conduction Hearing
 - 11.8.6. Curve of the Threshold of Irritation
 - 11.8.7. Tone Audiometry, Vocal Audiometry and Acoustic Audiometry
 - 11.8.8. Hearing Impairment: Degrees and Types of Hearing Loss
 - 11.8.9. Causes of Hearing Loss
 - 11.8.10. Psychobiological Aspects of Hearing Impairment
 - 11.8.11. Summary
 - 11.8.12. Bibliographic References
- 11.9. Hearing and Learning Development
 - 11.9.1. Introduction
 - 11.9.2. Development of the Human Ear
 - 11.9.3. Programs, Activities and Games for Auditory Development in Children
 - 11.9.4. Berard Method
 - 11.9.5. Tomatis Method
 - 11.9.6. Visual and Hearing Health
 - 11.9.7. Adaptations of Curricular Elements
 - 11.9.8. Summary
 - 11.9.10. Bibliographic References
- 11.10. Vision and Hearing Processes Involved in Reading
 - 11.10.1. Introduction
 - 11.10.2. Tracking Eye Movements
 - 11.10.3. The Visual System and Reading
 - 11.10.4. Dyslexia
 - 11.10.5. Color-Based Therapies for Dyslexia
 - 11.10.6. Visual Impairment Aids
 - 11.10.7. Summary
 - 11.10.8. Bibliographic References

- 11.11. Relationship Between Vision and Hearing in Language
 - 11.11.1. Introduction
 - 11.11.2. Relationship Between Vision and Hearing
 - 11.11.3. Verbal-Auditory and Visual Information Processing
 - 11.11.4. Intervention Programs for Hearing Disorders
 - 11.11.5. Guidelines for Teachers
 - 11.11.6. Summary
 - 11.11.7. Bibliographic References

Module 12. Motor Skills, Laterality and Writing

- 12.1. Neurobiological Basis Involved in Language
 - 12.1.1. Introduction
 - 12.1.2. Language Definitions
 - 12.1.3. Historical Background.
 - 12.1.4. Summary
 - 12.1.5. Bibliographic References
- 12.2. Development of Language
 - 12.2.1. Introduction
 - 12.2.2. Appearance of Language
 - 12.2.3. Language Acquisition
 - 12.2.4. Summary
 - 12.2.5. Bibliographic References
- 12.3. Neuropsychological Approaches to Language
 - 12.3.1. Introduction
 - 12.3.2. Brain Processes of Language
 - 12.3.3. Brain Areas Involved
 - 12.3.4. Neurolinguistic Processes
 - 12.3.5. Brain Centers Involved in Comprehension
 - 12.3.6. Summary
 - 12.3.7. Bibliographic References

- 12.4. Neuropsychology of Language Comprehension
 - 12.4.1. Introduction
 - 12.4.2. Brain Areas Involved in Comprehension
 - 12.4.3. Sounds
 - 12.4.4. Syntactic Structures for Linguistic Comprehension
 - 12.4.5. Semantic Processes and Meaningful Learning
 - 12.4.6. Reading Comprehension
 - 12.4.7. Summary
 - 12.4.8. Bibliographic References
- 12.5. Communication Through Language
 - 12.5.1. Introduction
 - 12.5.2. Language as a Tool for Communication
 - 12.5.3. Evolution of Language
 - 12.5.4. Social Communication
 - 12.5.5. Summary
 - 12.5.6. Bibliographic References
- 12.6. Language Disorders
 - 12.6.1. Introduction
 - 12.6.2. Speech and Language Disorders
 - 12.6.3. Professionals Involved in the Treatment
 - 12.6.4. Classroom Implications
 - 12.6.5. Summary
 - 12.6.6. Bibliographic References
- 12.7. Aphasia
 - 12.7.1. Introduction
 - 12.7.2. Types of Aphasia
 - 12.7.3. Diagnosis
 - 12.7.4. Assessment
 - 12.7.5. Summary
 - 12.7.6. Bibliographic References

- 12.8. Language Stimulation
 - 12.8.1. Introduction
 - 12.8.2. Importance of Language Stimulation
 - 12.8.3. Phonetic-Phonological Stimulation
 - 12.8.4. Lexical-Semantic Stimulation
 - 12.8.5. Morphosyntactic Stimulation
 - 12.8.6. Pragmatic Stimulation
 - 12.8.7. Summary
 - 12.8.8. Bibliographic References
- 12.9. Reading and Writing Disorders
 - 12.9.1. Introduction
 - 12.9.2. Delayed Reading
 - 12.9.3. Dyslexia
 - 12.9.4. Dysorthography
 - 12.9.5. Dysgraphia
 - 12.9.7. Treatment of Reading and Writing Disorders
 - 12.9.8. Summary
 - 12.9.9. Bibliographic References
- 12.10. Evaluation and Diagnosis of Language Difficulties
 - 12.10.1. Introduction
 - 12.10.2. Language Evaluation
 - 12.10.3. Language Assessment Procedures
 - 12.10.4. Psychological Tests for Assessing Language
 - 12.10.5. Summary
 - 12.10.6. Bibliographic References
- 12.11. Intervention in Language Disorders
 - 12.11.1. Introduction
 - 12.11.2. Implementation of Improvement Programs
 - 12.11.3. Improvement Programs
 - 12.11.4. Improvement Programs Using New Technologies
 - 12.11.5. Summary
 - 12.11.6. Bibliographic References

- 12.12. Incidence of Language Difficulties on Academic Performance
 - 12.12.1. Introduction
 - 12.12.2. Linguistic Processes
 - 12.12.3. Incidence of Language Disorders
 - 12.12.4. Relationship Between Hearing and Language
 - 12.12.5. Summary
 - 12.12.6. Bibliographic References
- 12.13. Guidance for Parents and Teachers
 - 12.13.1. Introduction
 - 12.13.2. Language Stimulation
 - 12.13.3. Reading Stimulation
 - 12.13.4. Summary
 - 12.13.5. Bibliographic References

Module 13. Methodological Strategies and Learning Difficulties

- 13.1. Techniques to Improve Self-Esteem
 - 13.1.1. Classification
 - 13.1.2. Description
- 13.2. Behavior Modification
 - 13.2.1. Identification
 - 13.2.2. Approach
- 13.3. Coping and Problem-Solving Strategies
 - 13.3.1. Classification
 - 13.3.2. Application
- 13.4. Social Skills
 - 13.4.1. Description of Shortcomings
 - 13.4.2. Intervention Models
- 13.5. Emotional Intelligence, Creativity and Emotional Education in the Classroom
 - 13.5.1. Emotional Intelligence and the Education of Emotions From the Model of Mayer and Salovey
 - 13.5.2. Other Models of Emotional Intelligence and Emotional Transformation
 - 13.5.3. Social-Emotional Competencies and Creativity by Level of Intelligence

- 13.5.4. Concept of Emotional Quotient, Intelligence and Adaptation in Learning Difficulties
- 13.5.5. Practical Classroom Resources to Prevent the Demotivation of Students with Learning Difficulties, and the Management of Disruptive Behaviors from Emotions
- 13.5.6. Standardized Tests to Assess Emotions
- 13.6. Learning Planning
 - 13.6.1. Application Resources
- 13.7. Study Techniques
 - 13.7.1. Description
 - 13.7.2. Applicable Developments
- 13.8. Learning Strategies
 - 13.8.1. Rehearsal Strategies
 - 13.8.2. Processing Strategies
 - 13.8.3. Organization Strategies
 - 13.8.4. Metacognitive Strategies
 - 13.8.5. Affective or Supportive Strategies
- 13.9. Motivation
 - 13.9.1. Contextualization
 - 13.9.2. Teaching Approaches
- 13.10. Family-Centered Intervention
 - 13.10.1. Understanding Learning Difficulties
 - 13.10.2. Acceptance of Reality
 - 13.10.3. Decision-Making in the Family Environment
 - 13.10.4. Behaviors within the Family
 - 13.10.5. Projects with the Family
 - 13.10.6. Emotional Intelligence. Managing Emotions
- 13.11. Inclusive Educational Intervention
 - 13.11.1. Educational Project of the Center Special Attention to Learning Needs
 - 13.11.2. Structural Adjustments
 - 13.11.3. Organizational Changes
- 13.11.4. Diversity Attention Plan
- 13.11.5. Teacher Training Plan
- 13.11.6. Curricular Actions
- 13.11.7. Organizing the Early Childhood Curriculum
- 13.11.8. Organizing the Primary Education Curriculum
- 13.11.9. Organizing the Secondary Education Curriculum
- 13.12. Neurolinguistic Programming (NLP) Applied to Learning Disabilities
 - 13.12.1. Justification and Objectives
 - 13.12.2. Basics of NLP
 - 13.12.2.1. Foundations of NLP
 - 13.12.2.2. The Assumptions and Premises of NLP
 - 13.12.2.3. Neurological Levels
 - 13.12.3. The Rules of the Mind
 - 13.12.4. Beliefs
 - 13.12.5. Different Ways of Looking at Reality
 - 13.12.6. States of Mind
 - 13.12.7. Shaping the Language
 - 13.12.8. Access to Unconscious Resources
- 13.13. Dynamic Learning in the Classroom
 - 13.13.1. Dynamic Learning According to Robert Dilts
 - 13.13.2. Activities According to Different Learning Styles
 - 13.13.3. Activities According to How Students Select Information
 - 13.13.4. Strategies to Develop the Visual System in the Classroom
 - 13.13.5. Strategies for Developing the Auditory System in the Classroom
 - 13.13.6. Strategies to Develop the Kinesthetic System in the Classroom
 - 13.13.7. Activities According to How Students Organize Information
 - 13.13.8. Left Hemisphere and Right Hemisphere Enhancing Activities
 - 13.13.8.1. Strategies for Working With the Whole Brain in the Classroom
 - 13.13.9. Techniques for Working on Beliefs
 - 13.13.10. Neuro-Linguistic Programming Techniques to Improve Students' Academic Performance

- 13.13.10.1. Techniques for Reflecting on Our Perception of Reality
 - 13.13.10.1.1. Techniques to Develop Flexible Thinking
 - 13.13.10.1.2. Techniques to Eliminate Blockages or Limitations
 - 13.13.10.1.3. Techniques to Clarify Objectives
- 13.13.10.2. Annexes With Tests, Records, Techniques, Situation Analysis, Evaluations and Follow-Ups
- 13.14. Cooperative Learning in Attention to Diversity
 - 13.14.1. Definition and Bases of Cooperative Learning
 - 13.14.2. Structure of Cooperative Learning
 - 13.14.3. Developed Skills and Capabilities
 - 13.14.4. Purposes of Cooperative Learning From a Multicultural Approach
 - 13.14.5. Application in Each of the Educational Stages
 - 13.14.5.1. Early Childhood Education
 - 13.14.5.1.1. Teamwork and Group Cohesion in Early Childhood Education
 - 13.14.5.1.1.1. Cooperative Techniques in Early Childhood Education
 - 13.14.5.2. Primary Education
 - 13.14.5.2.1. Didactics and Experiences in Primary Education Simple Structures
 - 13.14.5.2.2. Primary Research and Projects
 - 13.14.5.3. Secondary Education
 - 13.14.5.3.1. Importance of Roles in Secondary Education
 - 13.14.5.3.2. Evaluation of Cooperative Experiences in Secondary Schools
 - 13.14.6. Design of Activities and Group Dynamics
 - 13.14.7. The Role of the Teacher as Facilitator and Guide
 - 13.14.8. Assessment of Cooperative Learning
- 13.15. New Technologies Applied
 - 13.15.1. Diverse Approaches and Perspectives
 - 13.15.1.1. Information and Communication Technologies ICT
 - 13.15.1.2. Learning and Knowledge Technologies LKT
 - 13.15.1.3. Technologies of Empowerment and Participation TEP
 - 13.15.2. Impact of New Technologies in Education
 - 13.15.2.1. Digital Skills in Students
 - 13.15.2.2. Digital Skills in Teachers

- 13.15.2.3. The Role of Families and the Regulation of Use
- 13.15.3. Educating With the Use of New Technologies
 - 13.15.3.1. Digital Educational Content
 - 13.15.3.2. Tools
 - 13.15.3.3. Educational Platforms
- 13.15.4. The Transformation of Education with New Teaching Methods

Module 14. Multiple Intelligences, Creativity, Talent and High Abilities

- 14.1. Theory of Multiple Intelligences
 - 14.1.1. Introduction
 - 14.1.2. Medical history
 - 14.1.3. Conceptualization
 - 14.1.4. Validation
 - 14.1.5. Premises and Basic Principles of Theories
 - 14.1.6. Neuropsychological and Cognitive Science
 - 14.1.7. Classification of the Theories of Multiple Intelligences
 - 14.1.8. Summary
 - 14.1.9. Bibliographic References
- 14.2. Types of Multiple Intelligences
 - 14.2.1. Introduction
 - 14.2.2. Types of Intelligence
 - 14.2.3. Summary
 - 14.2.4. Bibliographic References
- 14.3. Assessment of Multiple Intelligences
 - 14.3.1. Introduction
 - 14.3.2. Medical history
 - 14.3.3. Types of Assessments
 - 14.3.4. Aspects to Consider in the Assessment
 - 14.3.5. Summary
 - 14.3.6. Bibliographic References
- 14.4. Creativity
 - 14.4.1. Introduction
 - 14.4.2. Concepts and Theories of Creativity

- 14.4.3. Approaches to the Study of Creativity
- 14.4.4. Characteristics of Creative Thinking
- 14.4.5. Types of Creativity
- 14.4.6. Summary
- 14.4.7. Bibliographic References
- 14.5. Neuropsychological Basis of Creativity
 - 14.5.1. Introduction
 - 14.5.2. Medical history
 - 14.5.3. Characteristics of Creative People
 - 14.5.4. Creative Products
 - 14.5.5. Neuropsychological Bases of Creativity
 - 14.5.6. Influence of the Environment and Context on Creativity
 - 14.5.7. Summary
 - 14.5.8. Bibliographic References
- 14.6. Creativity in the Educational Context
 - 14.6.1. Introduction
 - 14.6.2. Creativity in the Classroom
 - 14.6.3. Stages of the Creative Process
 - 14.6.4. How to Work on Creativity
 - 14.6.5. Connection Between Creativity and Thinking
 - 14.6.6. Modification in the Educational Context
 - 14.6.7. Summary
 - 14.6.8. Bibliographic References
- 14.7. Methodologies for Developing Creativity
 - 14.7.1. Introduction
 - 14.7.2. Programs for Developing Creativity
 - 14.7.3. Projects for Developing Creativity
 - 14.7.4. Promoting Creativity in the Family Context
 - 14.7.5. Summary
 - 14.7.6. Bibliographic References
- 14.8. Creativity Assessment and Guidance
 - 14.8.1. Introduction
 - 14.8.2. Considerations on Assessment
 - 14.8.3. Evaluation Tests
 - 14.8.4. Subjective Assessment Tests
 - 14.8.5. Guidance on Assessment
 - 14.8.6. Summary
 - 14.8.7. Bibliographic References
- 14.9. High Capacities and Talents
 - 14.9.1. Introduction
 - 14.9.2. Relationship Between Giftedness and High Capacities
 - 14.9.3. Connection Between Heredity and Environment
 - 14.9.4. Neuropsychological Foundation
 - 14.9.5. Models of Giftedness
 - 14.9.6. Summary
 - 14.9.7. Bibliographic References
- 14.10. Identification and Diagnosis of High Capacities
 - 14.10.1. Introduction
 - 14.10.2. Main Characteristics
 - 14.10.3. How to Identify High Capacities?
 - 14.10.4. Role the Involved Agents
 - 14.10.5. Assessment Tests and Instruments
 - 14.10.6. Intervention Programs
 - 14.10.7. Summary
 - 14.10.8. Bibliographic References
- 14.11. Problems and Difficulties
 - 14.11.1. Introduction
 - 14.11.2. Problems and Difficulties in the School Environment
 - 14.11.3. Myths and Beliefs
 - 14.11.4. Dyssynchronies
 - 14.11.5. Differential Diagnosis
 - 14.11.6. Differences Between Genders
 - 14.11.7. Educational Needs
 - 14.11.8. Summary
 - 14.11.9. Bibliographic References
- 14.12. Connection Between Multiple Intelligences, High Capacities, Talent and Creativity

- 14.12.1. Introduction
- 14.12.2. Connection Between Multiple Intelligences and Creativity
- 14.12.3. Connection Between Multiple Intelligences, High Capacities and Talents
- 14.12.4. Differences Between Talent and High Capacities
- 14.12.5. Creativity, High Capacities and Talent
- 14.12.6. Summary
- 14.12.7. Bibliographic References
- 14.13. Guiding and Developing Multiple Intelligences
 - 14.13.1. Introduction
 - 14.13.2. Advising Teachers
 - 14.13.3. Multidimensional Student Development
 - 14.13.4. Curricular Enrichment
 - 14.13.5. Strategies at Different Educational Levels
 - 14.13.6. Summary
 - 14.13.7. Bibliographic References
- 14.14. Creativity for Problem Solving
 - 14.14.1. Introduction
 - 14.14.2. Models of the Creative Process for Problem Solving
 - 14.14.3. Creative Project Development
 - 14.14.4. Summary
 - 14.14.5. Bibliographic References
- 14.15. Educational Process and Family Support
 - 14.15.1. Introduction
 - 14.15.2. Guidelines for Teachers
 - 14.15.3. Educational Response in Children
 - 14.15.4. Educational Response in Primary Education
 - 14.15.5. Educational Response in Secondary Education
 - 14.15.6. Coordination with Families
 - 14.15.7. Program Implementation
 - 14.15.8. Summary
 - 14.15.9. Bibliographic References

Module 15. Dyslexia, Dyscalculia and Hyperactivity

- 15.1. History of Learning Difficulties
 - 15.1.1. Introduction
 - 15.1.2. Definition of Learning Difficulties
 - 15.1.3. Historical Development
 - 15.1.4. Current Learning Difficulties
 - 15.1.5. Neuropsychology of Learning Difficulties
 - 15.1.6. Causes of Learning Difficulties
 - 15.1.7. Classification of Learning Difficulties
 - 15.1.8. Summary
 - 15.1.9. Bibliographic References
- 15.2. Conceptualization of Dyslexia
 - 15.2.1. Introduction
 - 15.2.2. Definition
 - 15.2.3. Neuropsychological Bases
 - 15.2.4. Characteristics
 - 15.2.5. Subtypes
 - 15.2.6. Summary
 - 15.2.7. Bibliographic References
- 15.3. Neuropsychological Assessment of Dyslexia
 - 15.3.1. Introduction
 - 15.3.2. Diagnostic Criteria for Dyslexia
 - 15.3.3. How to Assess it?
 - 15.3.4. Interview with the Tutor
 - 15.3.5. Reading and Writing
 - 15.3.6. Neuropsychological Assessment
 - 15.3.7. Assessment of Other Related Aspects
 - 15.3.8. Summary
 - 15.3.9. Bibliographic References
- 15.4. Neuropsychological Intervention of Dyslexia
 - 15.4.1. Introduction
 - 15.4.2. Variables Involved
 - 15.4.2. Neuropsychological Field

- 15.4.3. Intervention Programs
- 15.4.4. Summary
- 15.4.5. Bibliographic References
- 15.5. Conceptualization of Dyscalculia
 - 15.5.1. Introduction
 - 15.5.2. Definition of Dyscalculia
 - 15.5.3. Characteristics
 - 15.5.4. Neuropsychological Bases
 - 15.5.5. Summary
 - 15.5.6. Bibliographic References
- 15.6. Neuropsychological Assessment of Dyscalculia
 - 15.6.1. Introduction
 - 15.6.2. Assessment Objectives
 - 15.6.3. How to Assess it?
 - 15.6.4. Report
 - 15.6.5. Diagnosis
 - 15.9.6. Summary
 - 15.6.7. Bibliographic References
- 15.7. Neuropsychological intervention of Dyscalculia
 - 15.7.1. Introduction
 - 15.7.2. Variables Involved in the Treatment
 - 15.7.3. Neuropsychological Rehabilitation
 - 15.7.4. Intervention in Dyscalculia
 - 15.7.5. Summary
 - 15.7.6. Bibliographic References
- 15.8. Conceptualization of ADHD
 - 15.8.1. Introduction
 - 15.8.2. Definition of ADHD
 - 15.8.3. Neuropsychological Bases
 - 15.8.4. Characteristics of Children with ADHD
 - 15.8.5. Subtypes
 - 15.8.6. Summary
 - 15.8.7. Bibliographic References
- 15.9. Neuropsychological Assessment of ADHD
 - 15.9.1. Introduction
 - 15.9.2. Assessment Objectives
 - 15.9.3. How to Assess it?
 - 15.9.4. Report
 - 15.9.5. Diagnosis
 - 15.9.6. Summary
 - 15.9.7. Bibliographic References
- 15.10. Neuropsychological interventions of ADHD
 - 15.10.1. Introduction
 - 15.10.2. Neuropsychological Field
 - 15.10.3. Treatment of ADHD
 - 15.10.4. Other Therapies
 - 15.10.5. Intervention Programs
 - 15.10.6. Summary
 - 15.10.7. Bibliographic References
- 15.11. Comorbidity in Neurodevelopmental Disorders
 - 15.11.1. Introduction
 - 15.11.2. Neurodevelopment Disorders
 - 15.11.3. Dyslexia and Dyscalculia
 - 15.11.4. Dyslexia and ADHD
 - 15.11.5. Dyscalculia and ADHD
 - 15.11.6. Summary
 - 15.11.7. Bibliographic References
- 15.12. Neurotechnology
 - 15.12.1. Introduction
 - 15.12.2. Applied to Dyslexia
 - 15.12.3. Applied to Dyscalculia
 - 15.12.4. Applied to ADHD
 - 15.12.5. Summary
 - 15.12.6. Bibliographic References

- 15.13. Guidance for Parents and Teachers
 - 15.13.1. Introduction
 - 15.13.2. Guidance on Dyslexia
 - 15.13.3. Guidance on Dyscalculia
 - 15.13.4. Guidance on ADHD
 - 15.13.5. Summary
 - 15.13.6. Bibliographic References

Module 16. Neurolinguistic Processes, Difficulties and Intervention Programs

- 16.1. Neurobiological Basis Involved in Language
 - 16.1.1. Introduction
 - 16.1.2. Language Definitions
 - 16.1.3. Historical Background.
 - 16.1.4. Summary
 - 16.1.5. Bibliographic References
- 16.2. Development of Language
 - 16.2.1. Introduction
 - 16.2.2. Appearance of Language
 - 16.2.3. Language Acquisition
 - 16.2.4. Summary
 - 16.2.5. Bibliographic References
- 16.3. Neuropsychological Approaches to Language
 - 16.3.1. Introduction
 - 16.3.2. Brain Processes of Language
 - 16.3.3. Brain Areas Involved
 - 16.3.4. Neurolinguistic Processes
 - 16.3.5. Brain Centers Involved in Comprehension
 - 16.3.6. Summary
 - 16.3.7. Bibliographic References
- 16.4. Neuropsychology of Language Comprehension
 - 16.4.1. Introduction
 - 16.4.2. Brain Areas Involved in Comprehension
 - 16.4.3. Sounds
 - 16.4.4. Syntactic Structures for Linguistic Comprehension
 - 16.4.5. Semantic Processes and Meaningful Learning
 - 16.4.6. Reading Comprehension
 - 16.4.7. Summary
 - 16.4.8. Bibliographic References
- 16.5. Communication Through Language
 - 16.5.1. Introduction
 - 16.5.2. Language as a Tool for Communication
 - 16.5.3. Evolution of Language
 - 16.5.4. Social Communication
 - 16.5.5. Summary
 - 16.5.6. Bibliographic References
- 16.6. Language Disorders
 - 16.6.1. Introduction
 - 16.6.2. Speech and Language Disorders
 - 16.6.3. Professionals Involved in the Treatment
 - 16.6.4. Classroom Implications
 - 16.6.5. Summary
 - 16.6.6. Bibliographic References
- 16.7. Aphasia
 - 16.7.1. Introduction
 - 16.7.2. Types of Aphasia
 - 16.7.3. Diagnosis
 - 16.7.4. Assessment
 - 16.7.5. Summary
 - 16.7.6. Bibliographic References
- 16.8. Language Stimulation
 - 16.8.1. Introduction
 - 16.8.2. Importance of Language Stimulation
 - 16.8.3. Phonetic-Phonological Stimulation
 - 16.8.4. Lexical-Semantic Stimulation
 - 16.8.5. Morphosyntactic Stimulation

- 16.8.6. Pragmatic Stimulation
- 16.8.7. Summary
- 16.8.8. Bibliographic References
- 16.9. Reading and Writing Disorders
 - 16.9.1. Introduction
 - 16.9.2. Delayed Reading
 - 16.9.3. Dyslexia
 - 16.9.4. Dysorthography
 - 16.9.5. Dysgraphia
 - 16.9.6. Dyslalia
 - 16.9.7. Treatment of Reading and Writing Disorders
 - 16.9.8. Summary
 - 16.9.9. Bibliographic References
- 16.10. Evaluation and Diagnosis of Language Difficulties
 - 16.10.1. Introduction
 - 16.10.2. Language Evaluation
 - 16.10.3. Language Assessment Procedures
 - 16.10.4. Psychological Tests for Assessing Language
 - 16.10.5. Summary
 - 16.10.6. Bibliographic References
- 16.11. Intervention in Language Disorders
 - 16.11.1. Introduction
 - 16.11.2. Implementation of Improvement Programs
 - 16.11.3. Improvement Programs
 - 16.11.4. Improvement Programs Using New Technologies
 - 16.11.5. Summary
 - 16.11.6. Bibliographic References
- 16.12. Incidence of Language Difficulties on Academic Performance
 - 16.12.1. Introduction
 - 16.12.2. Linguistic Processes
 - 16.12.3. Incidence of Language Disorders
 - 16.12.4. Relationship Between Hearing and Language
 - 16.12.5. Summary
 - 16.12.6. Bibliographic References

- 16.13. Guidance for Parents and Teachers
 - 16.13.1. Introduction
 - 16.13.2. Language Stimulation
 - 16.13.3. Reading Stimulation
 - 16.13.4. Summary
 - 16.13.5. Bibliographic References

Module 17. Memory Processes, Skills and ICTs

- 17.1. Conceptual Bases of Memory
 - 17.1.1. Introduction and Objectives
 - 17.1.2. Concept and Definition of Memory
 - 17.1.3. Basic Processes of Memory
 - 17.1.4. Initial Research on Memory
 - 17.1.5. Classification of Memory
 - 17.1.6. Memory During Development
 - 17.1.7. General Strategies to Stimulate Memory
 - 17.1.8. Bibliographic References
- 17.2. Sensory Memory
 - 17.2.1. Introduction and Objectives
 - 17.2.2. Concept and Definition
 - 17.2.3. Neurobiological Foundations of Sensory Memory
 - 17.2.4. Assessing Sensory Memory
 - 17.2.5. Intervention in Educational Contexts of Sensory Memory
 - 17.2.6. Family Activities for Students From Three to Five Years of Age
 - 17.2.7. Sensory Memory Intervention Case Study
 - 17.2.8. Bibliographic References
- 17.3. Short-Term Memory
 - 17.3.1. Introduction and Objectives
 - 17.3.2. Concept and Definition of Short-Term Memory and Working Memory
 - 17.3.3. Neurobiological Bases of Short-Term and Working Memory
 - 17.3.4. Assessment of Short-Term and Working Memory
 - 17.3.5. Intervention in Educational Contexts of Short-Term Memory
 - 17.3.6. Family Activities for Students From Six to Eleven Years of Age

- 17.3.7. Working Memory Intervention Case Study
- 17.3.8. Bibliographic References
- 17.4. Long-Term Memory
 - 17.4.1. Introduction and Objectives
 - 17.4.2. Concept and Definition
 - 17.4.3. Neurobiological Bases of Long-Term Memory
 - 17.4.4. Assessment of Long-Term Memory
 - 17.4.5. Intervention in Educational Contexts of Long-Term Memory
 - 17.4.6. Family Activities for Students From Twelve to Eighteen Years of Age
 - 17.4.7. Long-Term Memory Intervention Case Study
- 17.5. Memory Disorders
 - 17.5.1. Introduction and Objectives
 - 17.5.2. Memory and Emotion
 - 17.5.3. Forgetfulness Theories of Forgetfulness
 - 17.5.4. Memory Distortions
 - 17.5.5. Memory Alterations: Amnesias
 - 17.5.6. Childhood Amnesia
 - 17.5.7. Other Types of Memory Alteration
 - 17.5.8. Programs to Improve Memory
 - 17.5.9. Technological Programs to Improve Memory
 - 17.5.10. Bibliographic References
- 17.6. Thinking Skills
 - 17.6.1. Introduction and Objectives
 - 17.6.2. Developing Thinking from Childhood to the Adult Age
 - 17.6.3. Basic Thought Processes
 - 17.6.4. Thinking Skills
 - 17.6.5. Critical Thinking
 - 17.6.6. Characteristics of Digital Natives
 - 17.6.7. Bibliographic References
- 17.7. Neurobiology of Thinking
 - 17.7.1. Introduction and Objectives
 - 17.7.2. Neurobiological Foundations of Thinking
 - 17.7.3. Cognitive distortions
 - 17.7.4. Neuropsychological Assessment Instruments
 - 17.7.5. Bibliographic References
- 17.8. Cognitive Intervention
 - 17.8.1. Introduction and Objectives
 - 17.8.2. Learning Strategies
 - 17.8.3. Cognitive Stimulation Techniques in Educational Contexts
 - 17.8.4. Methods for Studying at Home
 - 17.8.5. Cognitive Stimulation Activities in the Family Environment
 - 17.8.6. Learning Strategy Intervention Case Study
 - 17.8.7. Bibliographic References
- 17.9. Cognitive Thought Theories
 - 17.9.1. Introduction and Objectives
 - 17.9.2. Significant Learning Theory
 - 17.9.3. Information Processing Theory
 - 17.9.4. Genetic Theory: Constructivism
 - 17.9.5. Sociocultural Theory: Socioconstructivism
 - 17.9.6. Theory of Connectivism
 - 17.9.7. Metacognition: Learning to Think
 - 17.9.8. Programs for the Acquisition of Thinking Skills
 - 17.9.9. Technological Programs for the Improvement of Thinking Skills
 - 17.9.10. Thinking Skill Intervention Case Study
 - 17.9.11. Bibliographic References

Module 18. Research Methodology I

- 18.1. Research Methodology
 - 18.1.1. Introduction
 - 18.1.2. The Importance of Research Methodology
 - 18.1.3. Scientific Knowledge
 - 18.1.4. Research Approaches
 - 18.1.5. Summary
 - 18.1.6. Bibliographic References
- 18.2. Choosing the Topic to Research
 - 18.2.1. Introduction
 - 18.2.2. The Issue of Research
 - 18.2.3. Defining the Problem
 - 18.2.4. Choice of the Research Question
 - 18.2.5. Research Objectives
 - 18.2.6. Variables: Types
 - 18.2.7. Summary
 - 18.2.8. Bibliographic References
- 18.3. Research Proposal
 - 18.3.1. Introduction
 - 18.3.2. Research Hypothesis
 - 18.3.3. Feasibility of the Research Project
 - 18.3.4. Introduction and Justification of the Research
 - 18.3.5. Summary
 - 18.3.6. Bibliographic References
- 18.4. Theoretical Framework
 - 18.4.1. Introduction
 - 18.4.2. Producing the Theoretical Framework
 - 18.4.3. Resources Used
 - 18.4.4. APA Standards
 - 18.4.5. Summary
 - 18.4.6. Bibliographic References
- 18.5. Bibliography
 - 18.5.1. Introduction
 - 18.5.2. Importance of Bibliographic References
 - 18.5.3. How to Reference According to APA Standards?
 - 18.5.4. Format of Annexes: Tables and Figures
 - 18.5.5. Bibliography Managers: What are They and How to Use Them?
 - 18.5.6. Summary
 - 18.5.7. Bibliographic References
- 18.6. Methodological Framework
 - 18.6.1. Introduction
 - 18.6.2. Roadmap
 - 18.6.3. Sections to be Included in the Methodological Framework
 - 18.6.4. The Population
 - 18.6.5. The Sample
 - 18.6.6. Variables
 - 18.6.7. Instruments
 - 18.6.8. Procedure
 - 18.6.9. Summary
 - 18.6.10. Bibliographic References
- 18.7. Research Designs
 - 18.7.1. Introduction
 - 18.7.2. Types of Designs
 - 18.7.3. Characteristics of the Designs Used in Psychology
 - 18.7.4. Research Designs Used in Education
 - 18.7.5. Research Designs Used in Education Neuropsychology
 - 18.7.6. Summary
 - 18.7.7. Bibliographic References
- 18.8. Quantitative Research
 - 18.8.1. Introduction
 - 18.8.2. Designing Randomized Groups
 - 18.8.3. Designing Randomized Groups with Blocks
 - 18.8.4. Other Designs used in Psychology
 - 18.8.5. Statistical Techniques in Quantitative Research

- 18.8.6. Summary
- 18.8.7. Bibliographic References
- 18.9. Quantitative Research II
 - 18.9.1. Introduction
 - 18.9.2. Unifactorial Intrasubject Designs
 - 18.9.3. Techniques for Controlling the Effects of Intrasubject Designs
 - 18.9.4. Statistical Techniques
 - 18.9.5. Summary
 - 18.9.6. Bibliographic References
- 18.10. Results
 - 18.10.1. Introduction
 - 18.10.2. How to Gather Data?
 - 18.10.3. How to Analyze Data?
 - 18.10.4. Statistical Programs
 - 18.10.5. Summary
 - 18.10.6. Bibliographic References
- 18.11. Descriptive Statistics
 - 18.11.1. Introduction
 - 18.11.2. Research Variables
 - 18.11.3. Quantitative Analyses
 - 18.11.4. Qualitative Analyses
 - 18.11.5. Resources that Can Be Used
 - 18.11.6. Summary
 - 18.11.7. Bibliographic References
- 18.12. Testing Hypotheses
 - 18.12.1. Introduction
 - 18.12.2. Statistical Hypotheses
 - 18.12.3. How to Interpret Significance (P-Value)?
 - 18.12.4. Criteria for Analyzing Parametric and Non-Parametric Tests
 - 18.12.5. Summary
 - 18.12.6. Bibliographic References
- 18.13. Correlational Statistics and Independence Analysis
 - 18.13.1. Introduction
 - 18.13.2. Pearson Correlation
 - 18.13.3. Spearman's Correlation and Chi-Square
 - 18.13.4. Results
 - 18.13.5. Summary
 - 18.13.6. Bibliographic References
- 18.14. Group Comparison Statistics
 - 18.14.1. Introduction
 - 18.14.2. Mann-Whitney T-Test and Mann-Whitney U-Test
 - 18.14.3. T-Test and Wilcoxon Signed Ranges
 - 18.14.4. Results
 - 18.14.5. Summary
 - 18.14.6. Bibliographic References
- 18.15. Discussion and Conclusions
 - 18.15.1. Introduction
 - 18.15.2. What is the Discussion?
 - 18.15.3. Organization of the Discussion
 - 18.15.4. Conclusions
 - 18.15.5. Limitations and Outlook
 - 18.15.6. Summary
 - 18.15.7. Bibliographic References
- 18.16. Producing the Final Master's Degree Dissertation
 - 18.16.1. Introduction
 - 18.16.2. Front Page and Contents
 - 18.16.3. Introduction and Justification
 - 18.16.4. Theoretical Framework
 - 18.16.5. Methodological Framework
 - 18.16.6. Results
 - 18.16.7. Intervention Program
 - 18.16.8. Discussion and Conclusions
 - 18.16.9. Summary
 - 18.16.10. Bibliographic References

Module 19. Research Methodology II

- 19.1. Research in the Educational Environment
 - 19.1.1. Introduction
 - 19.1.2. Research Characteristics
 - 19.1.3. Research in the Classroom
 - 19.1.4. Keys Needed for Research
 - 19.1.5. Examples
 - 19.1.6. Summary
 - 19.1.7. Bibliographic References
- 19.2. Neuropsychological Research
 - 19.2.1. Introduction
 - 19.2.2. Educational Neuropsychological Research
 - 19.2.3. Knowledge and the Scientific Method
 - 19.2.4. Types of Approaches
 - 19.2.5. Research Stages
 - 19.2.6. Summary
 - 19.2.7. Bibliographic References
- 19.3. Ethics of Research
 - 19.3.1. Introduction
 - 19.3.2. Informed Consent
 - 19.3.3. Data Protection Law
 - 19.3.4. Summary
 - 19.3.5. Bibliographic References
- 19.4. Reliability and Validity
 - 19.4.1. Introduction
 - 19.4.2. Reliability and Validity in Research
 - 19.4.3. Reliability and Validity in Assessment
 - 19.4.4. Summary
 - 19.4.5. Bibliographic References
- 19.5. Controlling Variables in Research
 - 19.5.1. Introduction
 - 19.5.2. Choosing Variables
 - 19.5.3. Controlling Variables
 - 19.5.4. Sample Selection
 - 19.5.5. Summary
 - 19.5.6. Bibliographic References
- 19.6. The Quantitative Research Approach
 - 19.6.1. Introduction
 - 19.6.2. Characteristics
 - 19.6.3. Stages
 - 19.6.4. Assessment Tools
 - 19.6.5. Summary
 - 19.6.6. Bibliographic References
- 19.7. Qualitative Research Approach I
 - 19.7.1. Introduction
 - 19.7.2. Systematic Observation
 - 19.7.3. Research Stages
 - 19.7.4. Sampling Techniques
 - 19.7.5. Quality Control
 - 19.7.6. Statistical Techniques
 - 19.7.7. Summary
 - 19.7.8. Bibliographic References
- 19.8. Qualitative Research Approach II
 - 19.8.1. Introduction
 - 19.8.2. The Survey
 - 19.8.3. Sampling Techniques
 - 19.8.4. Survey Stages
 - 19.8.5. Research Designs
 - 19.8.6. Statistical Techniques
 - 19.8.7. Summary
 - 19.8.8. Bibliographic References
- 19.9. Qualitative Research Approach III
 - 19.9.1. Introduction
 - 19.9.2. Types of Interviews and Characteristics
 - 19.9.3. Preparing the Interview
 - 19.9.4. Group Interviews

- 19.9.5. Statistical Techniques
- 19.9.6. Summary
- 19.9.7. Bibliographic References
- 19.10. Single Case Designs
 - 19.10.1. Introduction
 - 19.10.2. Characteristics
 - 19.10.3. Types
 - 19.10.4. Statistical Techniques
 - 19.10.5. Summary
 - 19.10.6. Bibliographic References
- 19.11. Research-Action
 - 19.11.1. Introduction
 - 19.11.2. Objectives of Research-Action
 - 19.11.3. Characteristics
 - 19.11.4. Phases
 - 19.11.5. Myths
 - 19.11.6. Examples
 - 19.11.7. Summary
 - 19.11.8. Bibliographic References
- 19.12. Gathering Information for Research
 - 19.12.1. Introduction
 - 19.12.2. Techniques for Gathering Information
 - 19.12.3. Assessing Research
 - 19.12.4. Assessment
 - 19.12.5. Interpreting Results
 - 19.12.6. Summary
 - 19.12.7. Bibliographic References
- 19.13. Data Management in Research
 - 19.13.1. Introduction
 - 19.13.2. Databases
 - 19.13.3. Data in Excel
 - 19.13.4. Data in SPSS
 - 19.13.5. Summary
 - 19.13.6. Bibliographic References
- 19.14. Spreading Results in Neuropsychology
 - 19.14.1. Introduction
 - 19.14.2. Publications
 - 19.14.3. Specialized Journals
 - 19.14.4. Summary
 - 19.14.5. Bibliographic References
- 19.15. Scientific Journals
 - 19.15.1. Introduction
 - 19.15.2. Characteristics
 - 19.15.3. Types of Journals
 - 19.15.4. Quality Indicators
 - 19.15.5. Submitting Articles
 - 19.15.6. Summary
 - 19.15.7. Bibliographic References
- 19.16. The Scientific Paper
 - 19.16.1. Introduction
 - 19.16.2. Types and Characteristics
 - 19.16.3. Structure
 - 19.16.4. Quality Indicator
 - 19.16.5. Summary
 - 19.16.6. Bibliographic References
- 19.17. Scientific Conferences
 - 19.17.1. Introduction
 - 19.17.2. The Importance of Conferences
 - 19.17.3. Scientific Committees
 - 19.17.4. Oral Communications
 - 19.17.5. The Scientific Poster
 - 19.17.6. Summary.
 - 19.17.7. Bibliographic References

06

Methodology

This training program provides you with a different way of learning. Our methodology uses a cyclical learning approach: ***Re-learning***.

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 Re-learning, a system that abandons conventional linear learning, to take you through cyclical teaching systems: a way of learning that has proven to be extremely effective, especially in subjects that require memorization"

At TECH we use the Case Method

When faced with a certain situation, what should a professional do? Throughout the program, students will be presented with multiple simulated clinical cases based on real patients, where they will have to investigate, establish hypotheses and, finally, resolve the situation. There is abundant scientific evidence on the effectiveness of the method. Specialists learn better, faster, and more sustainably over time.

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



According to Dr. Gérvas, the clinical case is the annotated presentation of a patient, or group of patients, which becomes a "case", an example or model that illustrates some peculiar clinical component, either because of its teaching power or because of its uniqueness or rarity. It is essential that the case is based on current professional life, trying to recreate the real conditions in the psychologist's professional practice.

“

Did you know that this method was developed in 1912, at Harvard, for law students? The case method consisted of presenting students with real-life, complex situations for them to make decisions and justify their decisions on how to solve them. In 1924, Harvard adopted it as a standard teaching method"

The effectiveness of the method is justified by four fundamental achievements:

1. Psychologists who follow this method not only grasp concepts, but also develop their mental capacity by means of exercises to evaluate real situations and apply their knowledge.
2. The learning is solidly focused on practical skills that allow the psychologist to better integrate the knowledge into clinical practice.
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.



Re-learning Methodology

At TECH we enhance the Harvard case method with the best 100% online teaching methodology available: Re-learning.

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

The psychologist 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 Re-learning method has managed to improve the overall satisfaction levels of professionals who complete their studies, with respect to the quality indicators of the best Spanish-speaking online university (Columbia University).

With this methodology we have trained more than 150,000 psychologists with unprecedented success in all clinical 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.

Re-learning will allow you to learn with less effort and better performance, involving you more in your training, developing a critical mindset, defending arguments, and contrasting opinions: a direct equation to success.

In our program, learning is not a linear process, but rather a spiral (learn, unlearn, forget, and re-learn). Therefore, each of these elements are combined 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, specifically prepared for professionals:



Study Material

All teaching material is produced by the specialists who teach the course, specifically for the course, so that the teaching content is really specific and precise.

These contents are then applied to the audio-visual format to create the online work method of TECH. All with the newest techniques that offer items of great quality in all the materials made available to the students.



Latest Techniques and Procedures on Video

TECH introduces students to the latest techniques, to the latest educational advances, to the forefront of current psychology. All of this, first hand, with maximum rigor, explained and detailed to contribute to the assimilation and understanding of the student. And best of all, you can watch them as many times as you want.



Interactive Summaries

The team of TECH 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 educational content presentation system was awarded by Microsoft as a "European Success Story".



Additional Reading

Recent articles, consensus documents and international guidelines, among others. In the virtual library of TECH, students will have access to everything they need to complete their training.





Expert-Led Case Studies and Case Analysis

Effective learning ought to be contextual. Therefore, TECH presents real case developments in which the expert will guide the student through focusing on and solving the different situations: a clear and direct way to achieve the highest degree of understanding.



Testing & Retesting

Students' knowledge is periodically evaluated and re-evaluated throughout the program, through assessment and self-assessment activities and exercises: so that, this way, students can see how they are achieving their 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 with their learning.



07

Certificate

This Advanced Master's Degree in Clinical Neuropsychology and Neuroeducation guarantees you, in addition to the most rigorous and up-to-date training, access to a Advanced Master's Degree issued by TECH Technological University.



“

Successfully complete this Advanced Master's Degree and receive your university degree without travel or laborious paperwork”

This **Advanced Master's Degree in Clinical Neuropsychology and Neuroeducation** contains the most complete and up-to-date scientific program on the market.

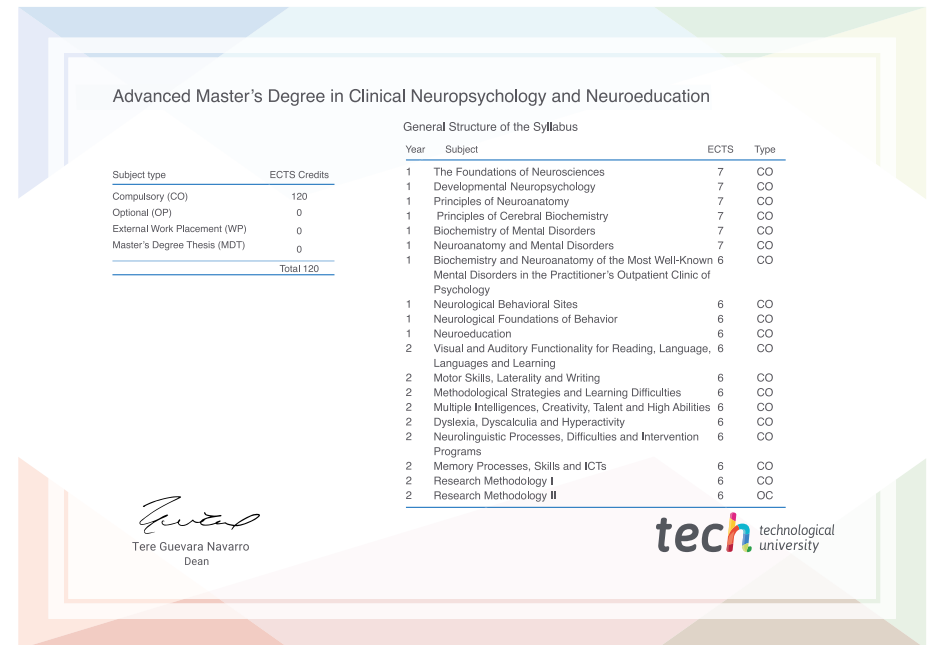
After the student has passed the evaluations, they will receive their corresponding **Advanced Master's Degree** title issued by **TECH Technological University** by tracked delivery.

The certificate issued by **TECH Technological University** will reflect the qualification obtained in the Advanced Master's Degree, and meets the requirements commonly demanded by labor exchanges, competitive examinations, and professional from career evaluation committees.

Title: **Advanced Master's Degree in Clinical Neuropsychology and Neuroeducation**

ECTS: **120**

Official N.º of Hours: **3,000 hours.**



*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.

future
health confidence people
education information tutors
guarantee accreditation teaching
institutions technology learning
community commitment
personalized service innovation
knowledge present quality
development languages
classroom



**Advanced Master's Degree
Clinical Neuropsychology
and Neuroeducation**

Course Modality: Online

Duration: 2 years

Certificate: TECH Technological University

120 ECTS Credits

Teaching Hours: 3,000 hours.

Advanced Master's Degree Clinical Neuropsychology and Neuroeducation

