Advanced Master's Degree

Clinical Neuropsychology and Neuroeducation

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Advanced Master's Degree
Clinical Neuropsychology and Neuroeducation

- Modality: **online**
- Duration: **2 years**
- Certificate: **TECH Technological University**
- Dedication: **16h/week**
- Schedule: **at your own pace**
- Exams: **online**

Website: www.techtitute.com/in/education/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 weight. This Advanced Master's Degree in Clinical Neuropsychology and Neuroeducation aims to take the teacher to a higher level of knowledge of the brain applied to these two areas, which will allow them to perform quality interventions, according to each problem.

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

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 professional a mastery of the neurological and biochemical mechanisms that occur in mental illness and health. For its part, the work of neuropsychology in education aims to train education 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 way in which the reticular system affects our behavior and consciousness, are essential topics of this educational program. An Advanced Master's Degree that is complemented with the functioning of memory, language, the relationship between laterality and cognitive development, among other aspects.

Throughout this specialization, the student will learn all of the current approaches to the different challenges posed by their profession. 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.

Not only will we take you through the theoretical knowledge offered, but we will show you another way of studying and learning, more organic, simpler and more efficient. We work to keep the student motivated and to create a passion for learning. We will push you to think and develop critical thinking.

This Advanced Master's Degree is designed to give you access to the specific knowledge of this discipline in an intensive and practical way. A great value for any professional.

This **Advanced Master's Degree in Clinical Neuropsychology and Neuroeducation** contains the most complete and up-to-date scientific program the market. The most important features of the program 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 remote training
- Continuous updating and retraining systems
- Autonomous learning: full compatibility with other occupations
- Practical exercises for self-evaluation and learning verification
- Support groups and educational synergies: Questions to the expert, discussion forums and knowledge
- Communication with the teacher and individual reflection work
- Content that is accessible from any, fixed or portable device with an Internet connection
- The supporting documentation databanks are permanently available, even after the program

A high-level scientific training program, supported by advanced technological development and the teaching experience of the best professionals"

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"

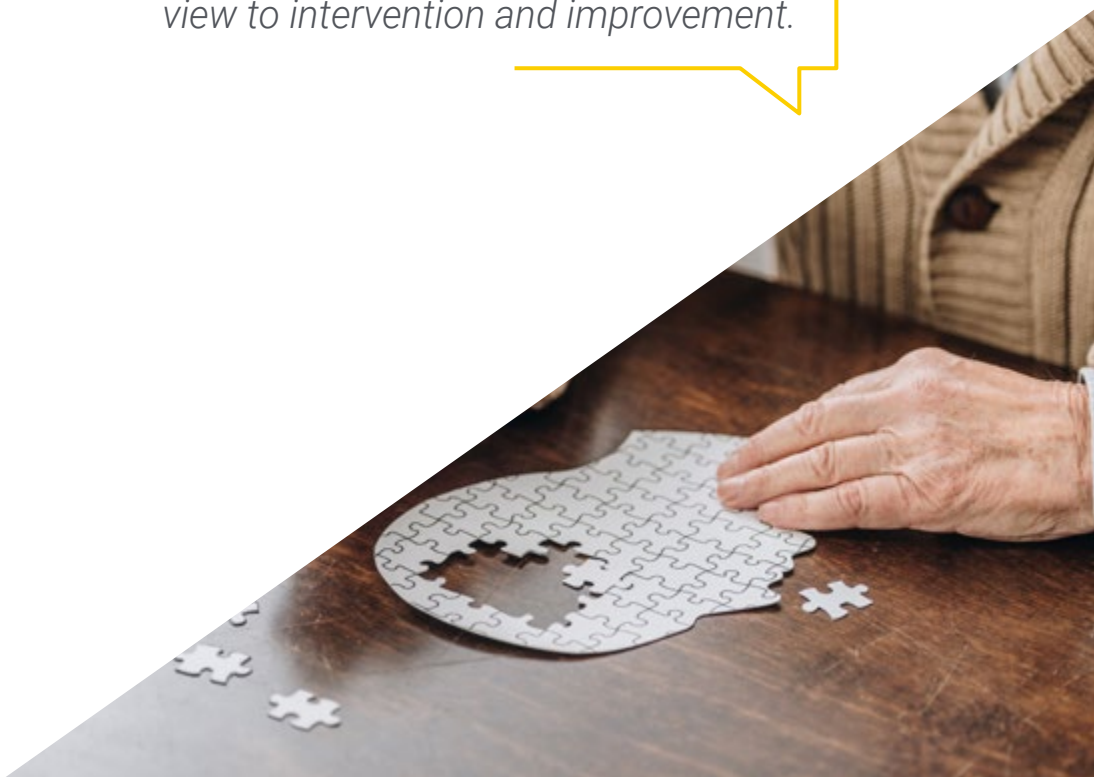
Our teaching staff is made up of working professionals. In this way TECH ensures that it delivers the educational update objective it is aiming for. A multidisciplinary team of trained professionals and experience in different environments, who will develop the theoretical knowledge in an efficient way, 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.

This command of the subject is complemented by the effectiveness of the methodological design 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 comfortable and versatile multimedia tools that will give you the operability you need in your training.

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 face you are learning about. A concept that will allow them 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.

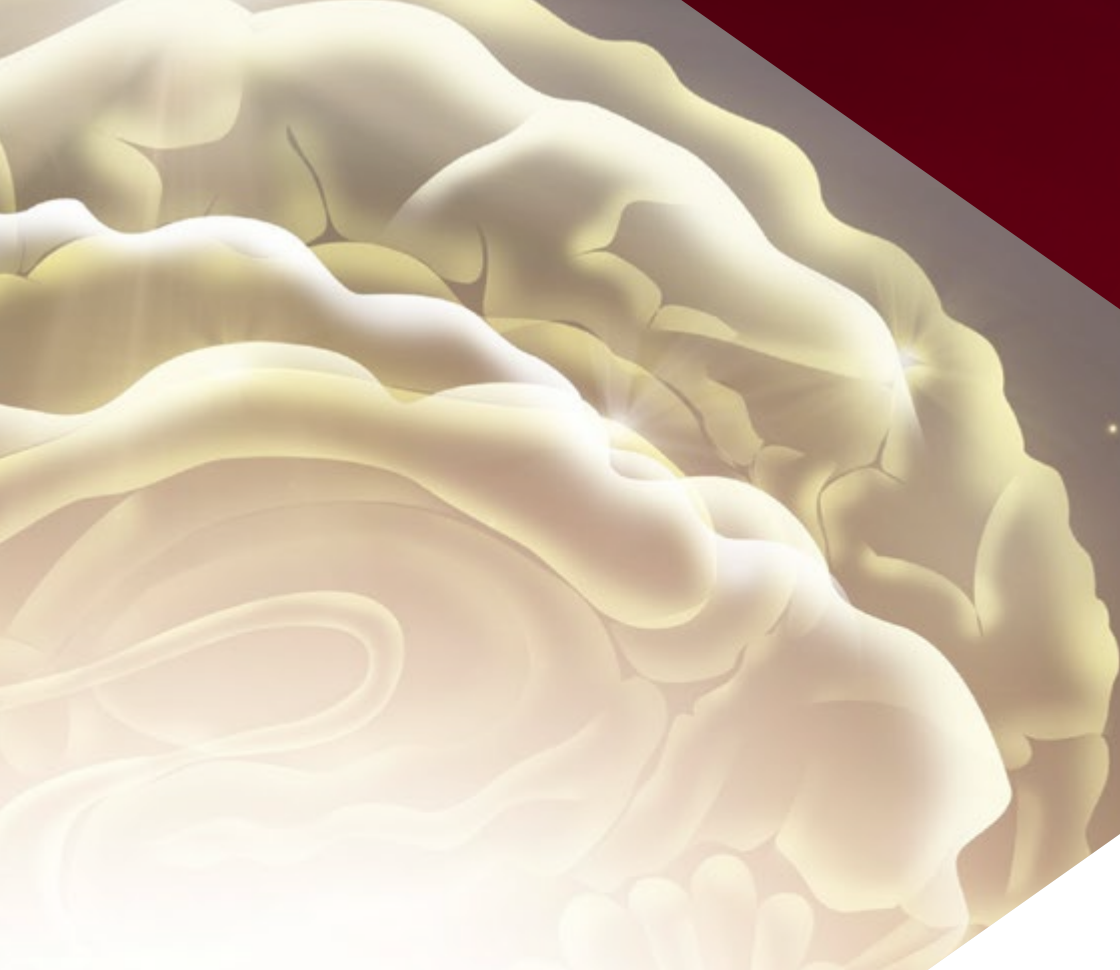
The sensory systems of the human being studied from the neuropsychologist's point of view, with a view to intervention and improvement.



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.



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 the 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 Cardiac 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 with students with vision 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
- 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
- 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, 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
- Know the possibilities of working in the area of high abilities
- 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
- Learn about the possibilities of neurotechnology applied to dyslexia, ADHD and dyscalculia
- Develop the neurobiological aspects involved in language development
- Study of 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 performance in this area. A very complete approach, in a high-level master's degree, which makes the difference.

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 the profession with respect to other health professionals, acquiring skills to work as a team
- Recognize the need to maintain and update professional skills with special emphasis on autonomous and continuous learning of new knowledge
- Develop the capacity for critical analysis and research in the field of their profession
- 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

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 from 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
- 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 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 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 fostering talent and creativity
- Develop efficient intervention programs for students with dyscalculia, dyslexia and hyperactivity
- Perform effective assessment, diagnosis and intervention of language difficulties

Our objective is very simple: to offer you quality training, with the best teaching system available today, so that you can achieve excellence in your profession"

04

Course Management

For our Advanced Master's Degree 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.

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

Codirectors

Dr. Martínez Lorca, Alberto

- Specialist in Nuclear Medicine
- Specialist in nuclear medicine area at the Rey Juan Carlos-Quirón University Hospital
- International Residency in Turku PET Centre
- Turku University Hospital. Finland
- Medical Education Manager
- Master's Degree in Time-Limited Psychotherapy and Health Psychology
- Coaching V.E.C
- Director of Neurological Studies at CEP in Madrid
- Specialist in Neurology of Dreams and their Disorders
- Disseminator for the children's population (Teddy Bear Hospital)

Ms. 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

Coordinator

Mr. Aguado Romo, Roberto

- Psychologist specializing in Clinical Psychology
- European specialist in Psychotherapy from the EFPA
- President of the European Institute of Time-Limited Psychotherapy
- Director of the Evaluation and Psychotherapy Center of Talavera, Bilbao and Madrid
- Director of the scientific journal Psinapsis
- Master in Clinical and Health Psychology by the Spanish Society of Psychosomatic Medicine and Health Psychology
  Tutor of the course Basic Psychology at UNED

Professors

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 Psychotherapies (I.E.P.T.L.)
- Specialist in Clinical Hypnosis and Relaxation

Ms. Roldan, Lucía

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

Ms. González Agüero, Mónica

- Psychologist in charge of the Department of Child and Adolescent Psychology at Hospital Quirón Salud Marbella and Avatar Psicólogos
- Master's Degree in Time-Limited Psychotherapy and Health Psychology by the European Institute
- of Time-Limited Psychotherapies (I.E.P.T.L.)
- University Specialist in Clinical Hypnosis with Selective Dissociation Focusing by the University of Almeria
- Collaborator in different Red Cross programs
- Professor in the Master's Degree in Time-Limited Psychotherapy and Health Psychology by the European Institute of Time-Limited Psychotherapy
- Trainer of Avatar Psicólogos in different programs of emotional management for educational centers and companies. Trainer at Human Resources Consulting Services (HRCS)

Dr. Kaisser Ramos, Carlos

- Otolaryngologist. Specialist in Rehabilitation and Physical Medicine
- Chief of the I.R.O. Service of the Segovia Hospital Complex
- Professor of Otorhinolaryngology at the Autonomous University of Madrid
- Full member of the Royal Academy of Medicine of Salamanca
- Academic of the Royal National Academy of Medicine
- Master's Degree in Time-Limited Psychotherapy and Health Psychology
- European Medical Specialist in Psychotherapy
- Expert in Psychosomatic Medicine
- Head of Studies and Director of Research in Psychopathic Disorders for the Institute
- of Time-Limited Psychotherapies (I.E.P.T.L.)
- Master's Degree in Clinical Psychology and Health Psychology by the Spanish Society of Psychosomatic Medicine and Medical Psychology

Dr. Fernández Sánchez, 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 Professional Master's Degree in Time-Limited Psychotherapy and Health clinica
- Specialist in Clinical Hypnosis and Relaxation

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 course enables you to learn all aspects of the different disciplines involved in this field. A very complete and well-structured program that will lead the student to the highest standards of quality and success.

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

Module 1. Basis 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 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. 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
2.2. The Brain: Structure and Function
2.3. Neuroscience and Learning
2.4. Multiple intelligences
2.5. Neurosciences and Education
2.6. Neurosciences in the Classroom
2.7. Playing and New Technologies
2.8. Body and Brain
2.9. Neuroscience for School Failure Prevention
2.10. Reason and Emotion

Module 3. Principles of Neuroanatomy

3.1. Nerve Fiber Classification (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. Mechanoceptors
  3.1.8. Sympathetic Nociceptors
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. Principals 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. Subtantia Nigra
6.3.2. Base Nodes
6.3.3. Locus Coeruleus
6.3.4. Raphe
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. Werkicke 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 and Drowsiness
7.1.5. Obnubilation, Stupor, Delirium, Coma, Twilight State
7.1.6. Clinical Agnosia, Anosoagnosia, Apraxia, Adiadocokinesia
7.1.7. Memory Disorders: Amnesia, Paramnesia, Amnesic Screen, Lethargy
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. Schizoid 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. Platform for Action
- 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. Subconscious 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. Plan

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. Pattern Intelligence
  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. Main Neuromyths
10.3. Attention
10.4. Emotion
10.5. Motivation
10.6. The Learning Process
10.7. Memory
10.8. Stimulation and Early Interventions
10.9. Importance of Creativity in Neuroeducation
10.10. 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. Vision Diseases and Alterations
  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. Bibliographical 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. Bibliographical 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. Bibliographical 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. Bibliographical 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. Bibliographical 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. Bibliographical 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. Bibliographical 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 Pain Threshold
- 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. Bibliographical 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. Bibliographical 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. Bibliographical 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. Bibliographical 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. Bibliographical References

12.2. Language Development
- 12.2.1. Introduction
- 12.2.2. Appearance of Language
- 12.2.3. Acquisition of Language
- 12.2.4. Summary
- 12.2.5. Bibliographical 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. Bibliographical 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. Bibliographical 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. Bibliographical 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. Bibliographical References

12.7. Aphasia
- 12.7.1. Introduction
- 12.7.2. Types of Aphasia
- 12.7.3. Microbiological
- 12.7.4. Assessment
- 12.7.5. Summary
- 12.7.6. Bibliographical 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. Bibliographical References

12.9. Reading and Writing Disorders
- 12.9.1. Introduction
- 12.9.2. Delayed Reading
- 12.9.3. Dyslexia
- 12.9.4. Dysorthographia
- 12.9.5. Dysgraphia
- 12.9.6. Treatment of Reading and Writing Disorders
- 12.9.7. Summary
- 12.9.8. Bibliographical 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. Bibliographical 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. Bibliographical 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. Bibliographical 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. Bibliographical 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. Behaviour 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 According to the Mayer and Salovey Model
- 13.5.2. Other Emotional Intelligence Models and Emotional Transformation
- 13.5.3. Socio-Emotional Skills and Creativity According to 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. The Center's Educational Project, Special Attention to Learning Needs
- 13.11.2. Structural Adjustments
- 13.11.3. Organizational Changes
- 13.11.4. Plan of Attention to Diversity
- 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 Communication and Technology ICT
13.15.1.2. Technology for Learning and Knowledge CAT
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. Bibliographical References
14.2. Types of Multiple Intelligences
14.2.1. Introduction
14.2.2. Types of Intelligence
14.2.3. Summary
14.2.4. Bibliographical 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. Bibliographical 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. Bibliographical 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. Bibliographical 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. Bibliographical 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. Bibliographical 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. Bibliographical 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. Bibliographical 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. Bibliographical 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. Bibliographical 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. Bibliographical 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. Bibliographical 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. Bibliographical 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. Bibliographical 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. Bibliographical References

15.2. Conceptualization of Dyslexia
- 15.2.1. Introduction
- 15.2.2. Definition
- 15.2.3. Neuropsychological Bases
- 15.2.4. Features
- 15.2.5. Subtypes
- 15.2.6. Summary
- 15.2.7. Bibliographical 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. Bibliographical 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
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15.9. Neuropsychological Assessment of ADHD
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- 15.11.4. Dyslexia and ADHD
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15.12. Neurotechnology
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- 16.4.3. Sounds
- 16.4.4. Syntactic Structures for Linguistic Comprehension
- 16.4.5. Semantic Processes and Meaningful Learning
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16.6. Language Disorders
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- 16.10.4. Psychological Tests for Assessing Language
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- 17.2.3. Neurobiological Foundations of Sensory Memory
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- 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
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17.4. Long-Term Memory
- 17.4.1. Introduction and Objectives
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- 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
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17.5. Memory Disorders
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17.7. Neurobiology of Thinking
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17.9. Cognitive Thought Theories
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18.5. Bibliography
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18.9. Quantitative Research II
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- 18.9.2. Unifactor Intrasubject Designs
- 18.9.3. Techniques for Controlling the Effects of Intrasubject Designs
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18.14. Group Comparison Statistics
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19.6. The Quantitative Research Approach
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19.7. The Quantitative Research Approach
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19.10. Single Case Designs
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19.11. Research-Action
- 19.11.1. Introduction
- 19.11.2. Objectives of Research-Action
- 19.11.3. Features
- 19.11.4. Phases
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- 19.11.6. Examples:
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19.12. Gathering Information for Research
- 19.12.1. Introduction
- 19.12.2. Techniques for Gathering Information
- 19.12.3. Assessing Research
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19.13. Data Management in Research
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19.14. Spreading Results in Neuropsychology
- 19.14.1. Introduction
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19.15. Scientific Journals
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19.16. The Scientific Article
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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. Bibliographical References

A comprehensive specialized program that will take you through the necessary training to compete with the best in your profession”

06

Methodology

This training program offers a different way of learning. Our methodology uses a cyclical learning approach: **Relearning.**

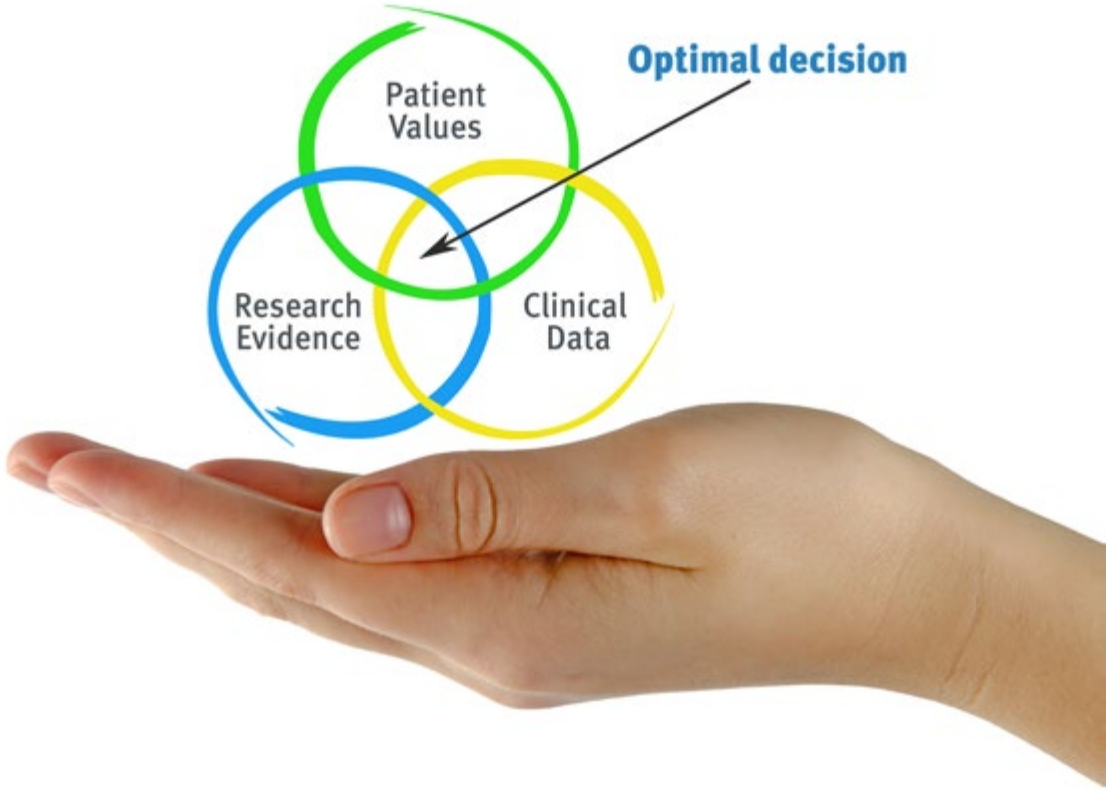
This teaching system is used, for example, in the most prestigious medical schools in the world, and major publications such as the **New England Journal of Medicine** have considered it to be one of the most effective.

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:

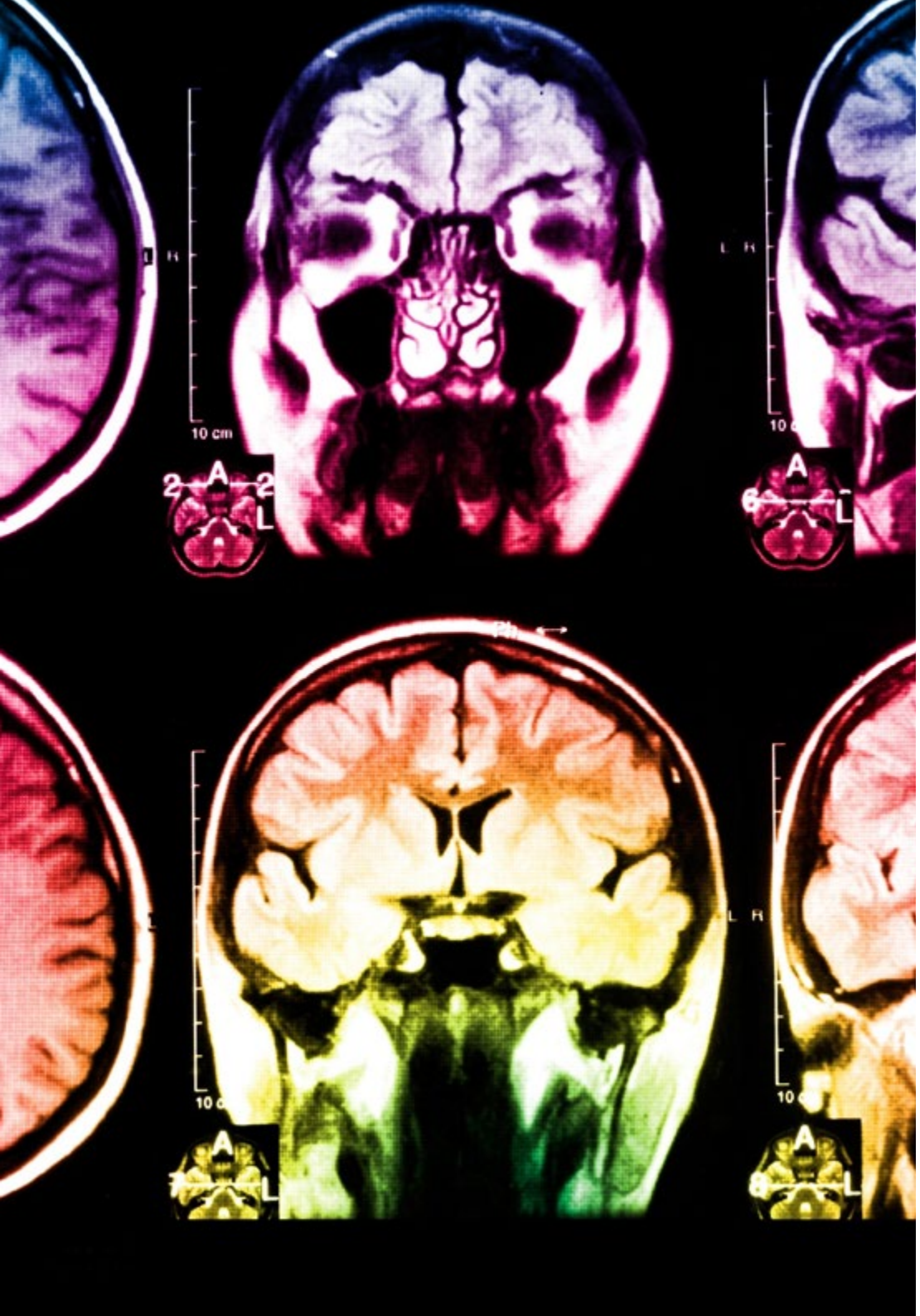
1. Educators who follow this method not only grasp concepts, but also develop their mental capacity, by evaluating real situations and applying their knowledge.
2. The learning process is solidly focused on practical skills that allow educators to better integrate the knowledge into daily practice.
3.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

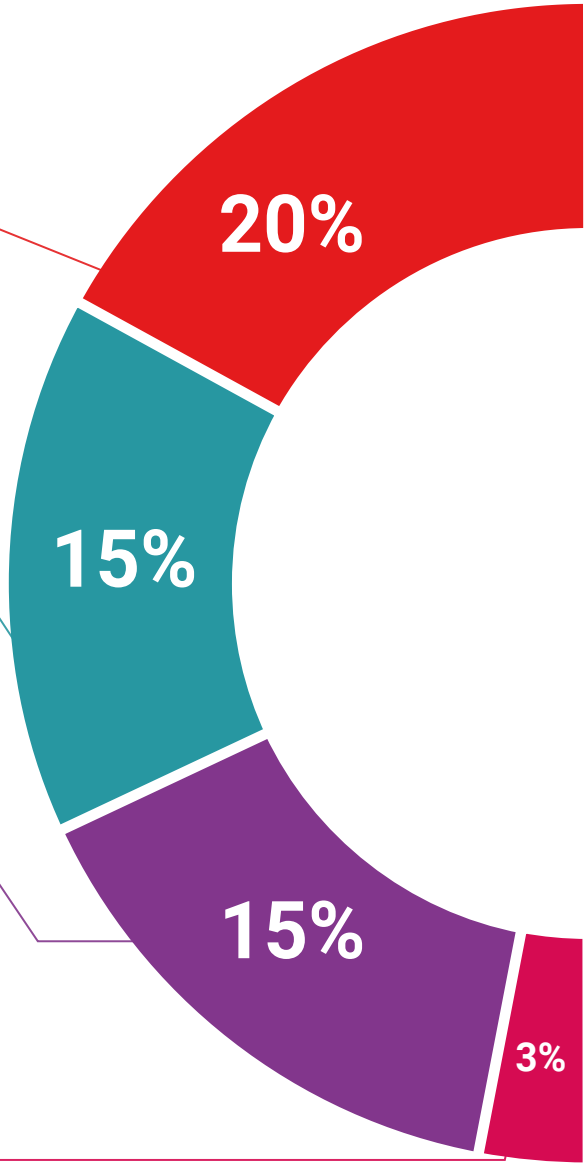
Interactive Summaries

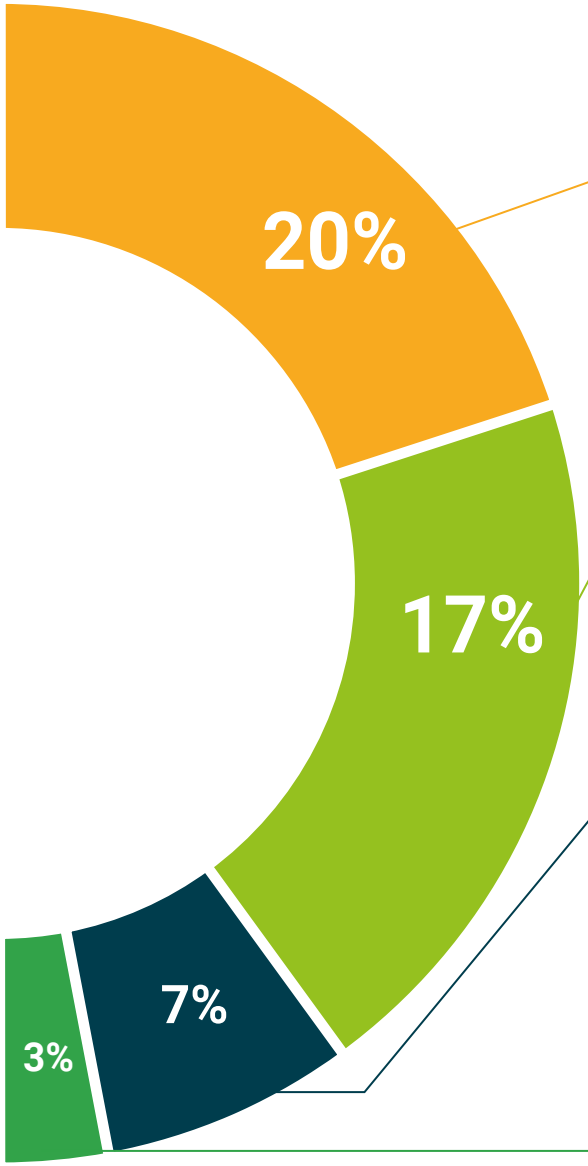
The TECH team presents the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

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.

07

Certificate

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

This Advanced Master's Degree in Clinical Neuropsychology and Neuroeducation is the largest body of knowledge in the industry: A degree that will be a highly qualified added value for any professional in this area"

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

After the student has passed the assessments, they will receive their corresponding **Advanced Master's Degree** issued by **TECH Technological University** via 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**

Official Nº of Hours: **3,000 h.**


tech technological university

Awards the following

CERTIFICATE

to

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

For having successfully passed and accredited the following program

ADVANCED MASTER'S DEGREE

in

Clinical Neuropsychology and Neuroeducation

This is a qualification awarded by this University, equivalent to 3,000 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

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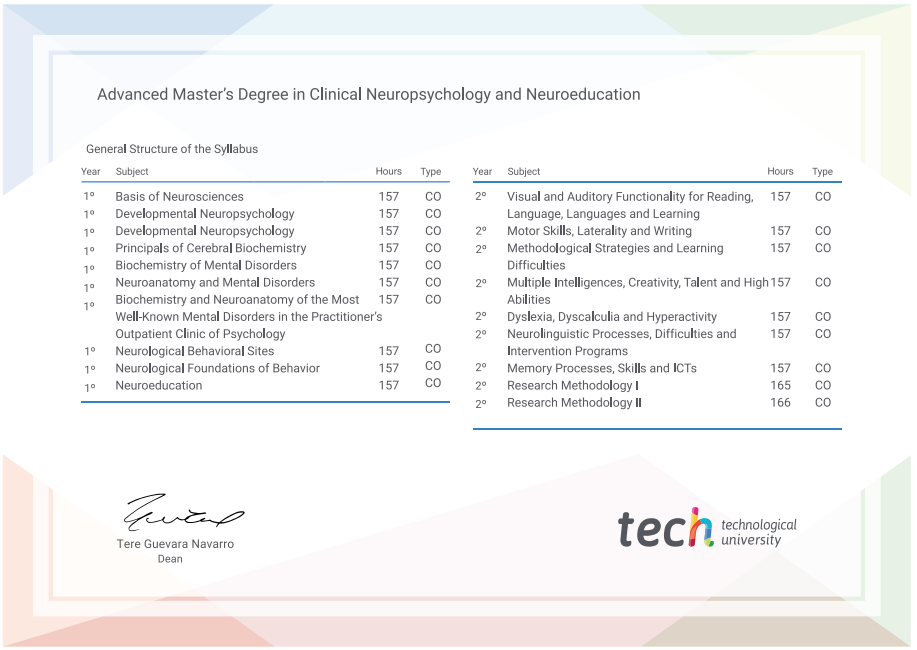
This qualification must always be accompanied by the university degree issued by the competent authority to practice professionally in each country. Unique TECH Code: AFWORD23S techtitute.com/certificates


Advanced Master's Degree in Clinical Neuropsychology and Neuroeducation

General Structure of the Syllabus

Year	Subject	Hours	Type
1º	Basis of Neurosciences	157	CO
1º	Developmental Neuropsychology	157	CO
1º	Developmental Neuropsychology	157	CO
1º	Principals of Cerebral Biochemistry	157	CO
1º	Biochemistry of Mental Disorders	157	CO
1º	Neuroanatomy and Mental Disorders	157	CO
1º	Biochemistry and Neuroanatomy of the Most Well-Known Mental Disorders in the Practitioner's Outpatient Clinic of Psychology	157	CO
1º	Neurological Behavioral Sites	157	CO
1º	Neurological Foundations of Behavior	157	CO
1º	Neuroeducation	157	CO

Year	Subject	Hours	Type
2º	Visual and Auditory Functionality for Reading, Language, Languages and Learning	157	CO
2º	Motor Skills, Laterality and Writing	157	CO
2º	Methodological Strategies and Learning Difficulties	157	CO
2º	Multiple Intelligences, Creativity, Talent and High Abilities	157	CO
2º	Dyslexia, Dyscalculia and Hyperactivity	157	CO
2º	Neurolinguistic Processes, Difficulties and Intervention Programs	157	CO
2º	Memory Processes, Skills and ICTs	157	CO
2º	Research Methodology I	165	CO
2º	Research Methodology II	166	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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Advanced Master's Degree

Clinical Neuropsychology and Neuroeducation

- Modality: **online**
- Duration: **2 years**
- Certificate: **TECH Technological University**
- Dedication: **16h/week**
- Schedule: **at your own pace**
- Exams: **online**

Advanced Master's Degree

Clinical Neuropsychology and Neuroeducation

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