

# Postgraduate Diploma

Logopedic Neurorehabilitation  
and Early Intervention for Nurses



## Postgraduate Diploma Logopedic Neurorehabilitation and Early Intervention for Nurses

- » Modality: online
- » Duration: 6 months
- » Certificate: TECH Global University
- » Credits: 18 ECTS
- » Schedule: at your own pace
- » Exams: online

Website: [www.techtute.com/us/nursing/postgraduate-diploma/postgraduate-diploma-logopedic-neurorehabilitation-early-intervention-nurses](http://www.techtute.com/us/nursing/postgraduate-diploma/postgraduate-diploma-logopedic-neurorehabilitation-early-intervention-nurses)

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# 01

# Introduction

Speech-language neurorehabilitation uses advances in new technologies for the development of speech skills and, in this case, focused on early care. Thanks to this Postgraduate Diploma, the nursing professional will acquire knowledge in this area that will allow him/her to lay the foundations to specialize in neurorehabilitation with the help of the main experts in the field. Thus, at the end of the specialization, the nurse will have the necessary competencies to practice in different health care settings, having the necessary knowledge to refer patients with speech therapy problems and to promote early care.





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*This Postgraduate Diploma will allow you to obtain a certificate endorsed by TECH Global University ”*

There is a wide professional demand for training to acquire the necessary skills to enable the speech-language pathologist and related professions to provide a comprehensive educational, health and clinical response. Both nurses and doctors will benefit from training actions that integrate the vision of clinical speech therapy and the needs of an educational response that demands speech therapy also in the school environment, without forgetting the clinical and health environment.

In this case, the professional speech therapist will focus their studies on neurorehabilitation and early care, in order to specialize in treatments that will facilitate the recovery of damage to the nervous system that affect the speech of their patients.

Thus, for example, orofacial myofunctional therapy (OMT) tries to create new neuromuscular patterns that improve these functions and also the articulation of speech and the patient's own aesthetics. The basis of the work is the laryngeal, oral, maxillary and facial system, intervening in various fields such as malformations, disabilities, congenital or acquired brain damage, neurodevelopmental disorders, etc., without forgetting the relationship between TOM, speech therapy and orthodontics, as well as its impact and involvement in neurodevelopment and physical-motor level.

This Postgraduate Diploma in Logopedic Neurorehabilitation and Early Intervention for Nurses is a response to the demand for continued specialization of health agents and is aimed primarily at nursing professionals. With this training course, the nurse will acquire skills to manage speech disorders or disorders of a logopedic nature in different work contexts. In addition, these studies can facilitate access to employment in this field, due to the high demand for this type of professional, whether in the health, clinical or educational fields.

This **Postgraduate Diploma in Logopedic Neurorehabilitation and Early Intervention for Nurses** contains the most complete and up to date scientific program on the market. The most important features of the program include:

- ♦ The development of a large number of case studies presented by experts in speech-language neurorehabilitation and early care. The graphic, schematic, and eminently practical contents with which they are created provide scientific and practical information on the disciplines that are essential for professional practice.
- ♦ New developments in the use of speech-language neurorehabilitation and early care.
- ♦ Its practical exercises where the self-evaluation process can be carried out to improve learning.
- ♦ Algorithm-based interactive learning system for decision-making in the situations that are presented to the student.
- ♦ Special emphasis on evidence-based methodologies in speech-language neurorehabilitation and early care.
- ♦ Theoretical lessons, questions to the expert, discussion forums on controversial issues and individual reflection papers.
- ♦ Content that is accessible from any fixed or portable device with an Internet connection.



*This specialization can be done in a comfortable way, as it is 100% online. All you need is a mobile device with an internet connection "*

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*This expert may be the best investment you can make in the selection of a refresher program for two reasons: in addition to updating your knowledge in Logopedic Neurorehabilitation and Early Intervention for Nurses, you will obtain an expert degree from TECH Global University”*

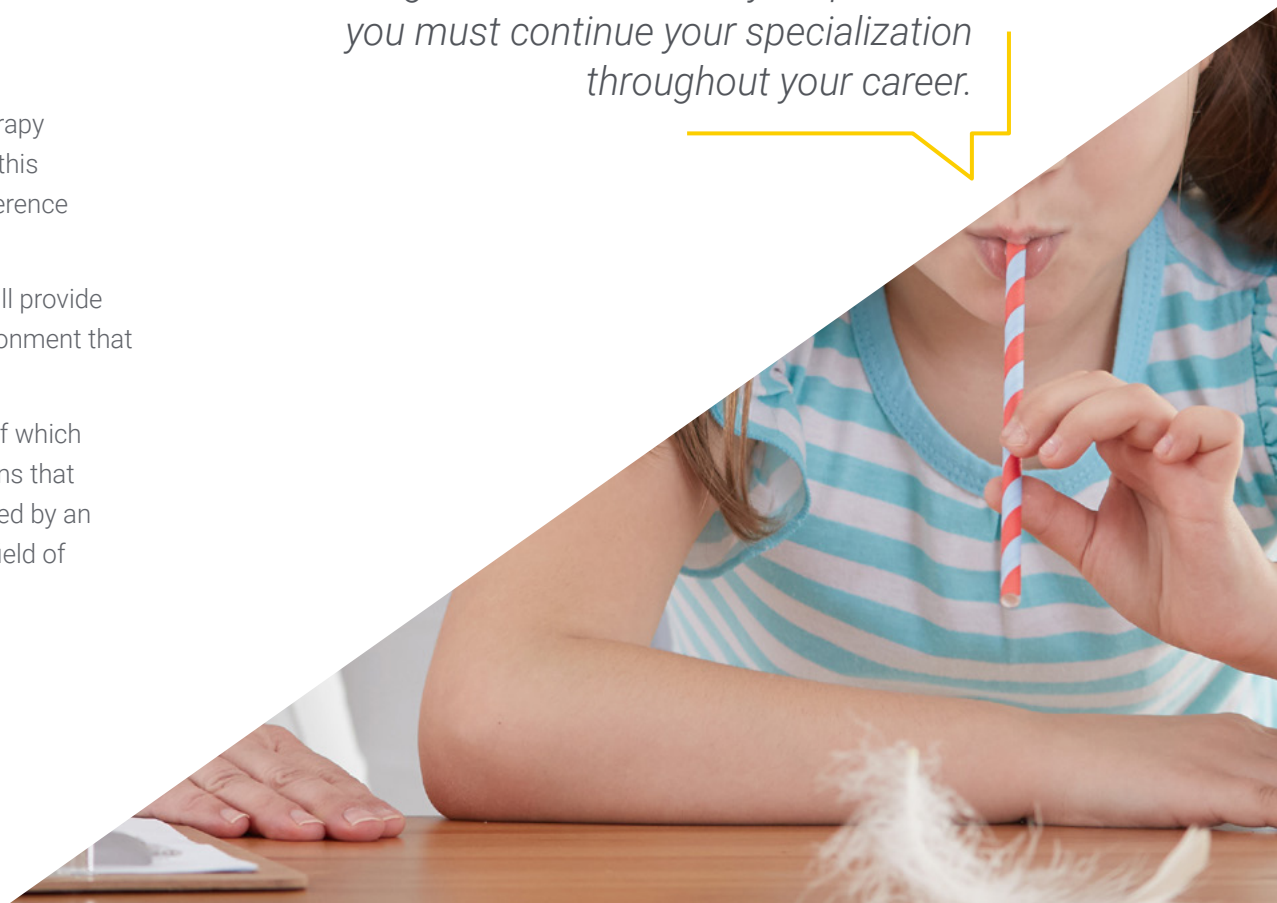
Its teaching staff includes professionals belonging to the field of speech therapy neurorehabilitation and early care, who bring the experience of their work to this specialization, as well as recognized specialists belonging to prestigious reference societies and universities.

The multimedia content developed with the latest educational technology will provide the professional with situated and contextual learning, i.e., a simulated environment that will provide an immersive training program to train in real situations.

The design of this program is based on problem-based learning, by means of which the professional must try to solve the different professional practice situations that arise throughout the course. For this purpose, the professional will be assisted by an innovative interactive video system developed by recognized experts in the field of speech therapy neurorehabilitation with extensive teaching experience.

*The multimedia content of this specialization will allow you to practice with real situations.*

*If you want to advance in your daily practice to give the best care to your patients, you must continue your specialization throughout your career.*





02

# Objectives

The **Postgraduate Certificate in Logopedic Neurorehabilitation and Early Intervention for Nurses** is oriented towards training nurses to be able to carry out a successful performance in the neurorehabilitation of patients with speech problems, as well as to refer them for early and effective care. In this way, the nurse will acquire the necessary competencies to enter the labor market with greater guarantees of success.







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*Specialize as an expert nurse in Dialogic Neurorehabilitation and Early Intervention, thanks to the specialization that we offer you in this university course”*



## General Objectives

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- ♦ Develop a broad knowledge of the anatomical and functional basis of the central and peripheral nervous system.
- ♦ Study the anatomy and function of the organs involved in basic functions such as respiration, phonation and swallowing.
- ♦ Acquire knowledge in both assessment and speech therapy intervention.
- ♦ Deepen knowledge of rehabilitation techniques endorsed in clinical practice.
- ♦ Develop intervention skills gained from complementary disciplines such as neuropsychology, physiotherapy and psychology.
- ♦ Handle the assessment, diagnosis and treatment of neurofunctional and logopedic disorders in specific groups with neurodevelopmental or syndromic disorders.
- ♦ Know various approaches and intervention programs in speech-language neurorehabilitation.



## Specific Objectives

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### Module 1

- ♦ Learn about the history of the brain and how it has been the subject of study since ancient times.
- ♦ Study the basis of the nervous system to understand the functioning of the brain.
- ♦ Detail in general terms what are the stages of embryological development of the nervous system.
- ♦ Classify the different structures that form the central nervous system.
- ♦ Study the structural and functional organization of the cerebral cortex.
- ♦ Identify the general characteristics that make up the ascending and descending pathways of the spinal cord.
- ♦ Recognize the differences between the pediatric and adult population in clinical practice.
- ♦ Study the different functions performed by the autonomic nervous system.
- ♦ Know the characteristics that constitute motor control.

### Module 2

- ♦ Knowing the different brain damage diseases as a basis for neuropsychological exploration.
- ♦ Know which are the basic cognitive functions.
- ♦ Know how to conceptualize the functions of attention, memory and perception.
- ♦ Know the classifications, processes and systems.
- ♦ Acquire basic knowledge of tests used for evaluation.
- ♦ Know the main alterations of the functions studied in the present topic.
- ♦ Make an introduction to the knowledge of the Executive Functions and Language.

- ♦ Know what neuropsychological rehabilitation consists of and how to approach each cognitive function.
  - ♦ Know different behavior modification techniques (BCT).
  - ♦ Have a basic understanding of how to apply TMC.
  - ♦ Acquire tools to act in the event of behavioral alterations.
  - ♦ Know how to apply CCT to the logopedic field in order to achieve higher performance.
  - ♦ Know the clinical implication of occupational therapy in speech therapy rehabilitation.
  - ♦ Know the clinical implication of occupational therapy in speech therapy rehabilitation.
  - ♦ Knowing the role of families during the rehabilitation process.
  - ♦ Apply theoretical knowledge to a clinical case: The main objective of this topic is to know how to program a rehabilitative treatment for a case of severe TBI with aphasia. Perform a proper multidisciplinary assessment and collect relevant information from the family to establish a comprehensive work plan tailored to the individual.
- ♦ Detect the signs of proper positioning, as well as apply them to various breastfeeding postures.
  - ♦ Learn to use alternative techniques for infant feeding.
  - ♦ Learn to manage the different intervention strategies at orofacial level in pediatric age in children with swallowing disorders.
  - ♦ Know and develop action plans during feeding that can help in the first instance with a high possibility of success.
  - ♦ Create feeding programs adapted and individualized to each case in a preventive, re-educative and rehabilitative way.

### Module 3

- ♦ Understand the oral-facial behavior, both innate and acquired, of the infant.
- ♦ Recognize the correct motor pattern in swallowing, breathing and sucking.
- ♦ Early detection of a functional alteration in feeding.
- ♦ Know the importance of oro-facial growth and development of vegetative functions at the pediatric level.



03

# Course Management

The program includes in its teaching staff reference specialists in speech therapy neurorehabilitation, medicine and nursing who bring the experience of their work to this specialization. Additionally, other recognized specialists participate in its design and preparation, which means that the program is developed in an interdisciplinary manner. All this, with the aim of training nursing professionals much more competent and prepared to provide early care to patients requiring rehabilitation for speech dysfunctions.



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*Leading experts in the field have pooled their knowledge to offer you this Postgraduate Diploma”*

## Management



### Santacruz García, Estefanía

- Social Integration and Speech-Language Pathologist
- Specialist in Orofacial and Myofunctional Therapy. Clínica Uner - Neurorehabilitation Unit, Integral Brain Injury Unit
- Teacher at Cefire, Center for Training, Innovation and Educational Resources of the Community of Valencia.



### Borrás Sanchís, Salvador

- Psychologist
- Teacher and Speech Therapist
- Educational Counselor at Generalitat Valenciana, Regional Government of Valencia, Education Department (Valencian Regional Government)
- Pedagogical Director at the DEIAP Institute



## Professors

### **Álvarez Valdés, Paula del Carmen**

- ◆ Clinical Speech Therapist Specialist in Myofunctional Therapy
- ◆ Expert in the Psychodiagnosis and Treatment of Early Childhood Care
- ◆ Direct collaboration in the dental office

### **Dr. Carrasco Delarriva, Concha**

- ◆ Neuropsychologist and Assistant Professor of the Department of Psychology at the Catholic University San Antonio of Murcia, UCAM.
- ◆ Child Neuropsychology
- ◆ Master's Degree in Neuropsychology
- ◆ Spanish Association of Cognitive-Behavioral Clinical Psychology
- ◆ Cognitive and Child Rehabilitation Postgraduate

### **Gallego Díaz, Mireia**

- ◆ Occupational Therapist
- ◆ Speech Therapist Expert in Glutition Disorders
- ◆ Hospital Speech Therapist

### **García Gómez, Andrea M<sup>a</sup>**

- ◆ Clinical Speech Therapist Specializing in Brain Injury
- ◆ Neurologopedist in Neurorehabilitation Unit

### **Jiménez Jiménez, Ana**

- ◆ Social Worker and Clinical Neuropsychologist
- ◆ Specialized in Neurorehabilitation in the area of Brain Injury in the clinical setting.



04

# Structure and Content

The structure of the contents has been designed by a team of professionals from the best educational centers, universities and companies in the national territory, aware of the relevance of current specialization in order to intervene in the specialization and accompaniment of students, and committed to quality teaching through new educational technologies.





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*Study with us and you will get the most complete and up to date content on the market"*



## Module 1. Introduction to Neurorehabilitation I : Basic Fundamentals of Neuroanatomy

- 1.1. History of the Discovery of the Brain.
  - 1.1.1. History of the Discovery of the Brain.
    - 1.1.1.1. Introduction.
    - 1.1.1.2. Stages in the History of the Brain: Mind vs. Brain.
      - 1.1.1.2.1. From Antiquity to the 2nd Century.
      - 1.1.1.2.2. From the 11th to the 17th Century.
      - 1.1.1.2.3. From the 19th Century to the Present.
    - 1.1.1.3. A Modern View of the Brain.
    - 1.1.1.4. Neuropsychological Rehabilitation.
    - 1.1.1.5. Conclusions.
    - 1.1.1.6. Bibliography.
  - 1.1.2. Introduction to the Nervous System.
    - 1.2.1. Introduction.
    - 1.2.2. The Neuron.
      - 1.2.2.1. Anatomy of Cells.
      - 1.2.2.2. Cell Functions.
      - 1.2.2.3. Classification of Neurons.
      - 1.2.2.4. Support Cells or Glia.
    - 1.2.3. Transmission of Information.
      - 1.2.3.1. Action Potentials.
        - 1.2.3.1.1. Resting Potential.
        - 1.2.3.1.2. Potential for Action.
        - 1.2.3.1.3. Postsynaptic Potential, Local or Graded.
      - 1.2.4. Neural Circuits.
      - 1.2.5. Hierarchical Neural Organization.
        - 1.2.5.1. Introduction.
        - 1.2.5.2. Features.
      - 1.2.6. Brain Plasticity.
      - 1.2.7. Conclusions.
    - 1.3. Neurodevelopment.
      - 1.3.1. Introduction.



- 1.3.2. Phases of Brain Development.
    - 1.3.2.1. Neurogenesis: Proliferation
    - 1.3.2.2. Cell Migration.
    - 1.3.2.3. Cell Differentiation.
    - 1.3.2.4. Synaptogenesis.
    - 1.3.2.5. Apoptosis: Neuronal Death.
    - 1.3.2.6. Myelination.
  - 1.3.3. Brain Maturation from Birth to Adolescence.
  - 1.3.4. Actuation Systems in the Newborn: Reflexes.
  - 1.3.5. Alarm Signs.
  - 1.3.6. Conclusions.
  - 1.3.7. Bibliography.
- 1.4. Central Nervous System.
- 1.4.1. Introduction.
  - 1.4.2. Peripheral Nervous System.
  - 1.4.3. Central Nervous System.
    - 1.4.3.1. CNS Protection System: Meninges.
    - 1.4.3.2. CNS Irrigation.
    - 1.4.3.3. Spinal Cord
    - 1.4.3.4. Brain.
      - 1.4.3.4.1. Introduction.
      - 1.4.3.4.2. Structure.
        - 1.4.3.4.2.1. Brain Stem.
        - 1.4.3.4.2.2. Rhombencephalon or Hindbrain.
        - 1.4.3.4.2.3. Midbrain or Midbrain.
        - 1.4.3.4.2.4. Prosencephalon or Forebrain.
  - 1.4.4. Conclusions.
  - 1.4.5. Bibliography.
- 1.5. Structural and Functional Organization of the Cerebral Cortex.
  - 1.5.1. Introduction.
  - 1.5.2. Brodmann's Map.
  - 1.5.3. Cerebral Hemispheres and Cerebral Cortex: Structural Organization.
    - 1.5.3.1. Circumvolutions and Main Sulci.Cerebral Lobes.
    - 1.5.3.2. Structure of the Cerebral Cortex.
    - 1.5.3.3. White Matter.
      - 1.5.3.3.1. Association Fibers.
      - 1.5.3.3.2. Commissural Fibers.
      - 1.5.3.3.3. Projection Fibers.
    - 1.5.4. Cortical Areas: Functional Organization.
    - 1.5.5. Conclusions.
    - 1.5.6. Bibliography.
- 1.6. Spinal Cord Pathways.
  - 1.6.1. Spinal Cord.
  - 1.6.2. Ascending Spinal Cord Tracts.
  - 1.6.3. Anatomical Organization.
  - 1.6.4. Functions and Injuries of the Ascending Pathways.
  - 1.6.5. Descending Spinal Cord Tracts.
  - 1.6.6. Anatomical Organization.
  - 1.6.7. Functions of the Descending Pathways.
  - 1.6.8. Descending Tract Injuries.
  - 1.6.9. Sensory Receptors.
  - 1.6.10. Anatomical Types of Receptors.
- 1.7. Cranial Nerves.
  - 1.7.1. Basic Vocabulary.
  - 1.7.2. Introduction.
  - 1.7.3. History
  - 1.7.4. Components.
  - 1.7.5. Classification.
  - 1.7.6. Pathologies.
  - 1.7.7. Summary.
- 1.8. Spinal Nerves.
  - 1.8.1. Introduction.
  - 1.8.2. Components.
  - 1.8.3. Dermatomes.
  - 1.8.4. Plexuses.
  - 1.8.5. Cervical Plexus.

- 1.8.6. Brachial Plexus.
- 1.8.7. Lumbar Plexus.
- 1.8.8. Sacral Plexus.
- 1.8.9. Pathologies.
- 1.9. Autonomic Nervous System.
  - 1.9.1. Basic Vocabulary.
  - 1.9.2. Generalities of the Autonomic Nervous System.
  - 1.9.3. Functions of the SNA.
  - 1.9.4. Somatic Nervous System Vs. Autonomic Nervous System.
  - 1.9.5. Organisation.
  - 1.9.6. Sympathetic ANS.
  - 1.9.7. Parasympathetic ANS.
  - 1.9.8. Enteric Nervous System
  - 1.9.9. Alterations in the Autonomic Nervous System.
- 1.10. Motor Control
  - 1.10.1. Somatosensory System.
  - 1.10.2. Upper Motor Circuit.
  - 1.10.3. Movement.
  - 1.10.4. Introduction to Motor Control.
  - 1.10.5. Clinical Applications of Motor Control and Learning in Neurorehabilitation.
  - 1.10.6. Neurological Involvement.
  - 1.10.7. Global Summary.

## Module 2. Introduction to Neurorehabilitation II: Relationship with Speech Therapy Treatment

- 2.1. Etiology of Brain Injury.
  - 2.1.1. Introduction.
  - 2.1.2. Vascular Disorders.
    - 2.1.2.1. Occlusive Syndrome.
    - 2.1.2.2. Types of Cerebrovascular Disease.
    - 2.1.2.3. Neuropsychological Alterations in Stroke.
  - 2.1.3. Intracranial Neoplasms.
    - 2.1.3.1. General Characteristics.
    - 2.1.3.2. Tumor Classification.
    - 2.1.3.3. Neuropsychological Alterations in Tumors.
- 2.1.4. Cranioencephalic Trauma (TCE).
  - 2.1.4.1. General Characteristics.
  - 2.1.4.2. Types of TCE.
  - 2.1.4.3. Alterations in TCE.
- 2.1.5. Neurodegenerative Diseases.
  - 2.1.5.1. General Characteristics.
  - 2.1.5.2. Types and Alterations.
- 2.1.6. Epilepsy.
  - 2.1.6.1. General Characteristics.
  - 2.1.6.1 Classification.
- 2.1.7. Central Nervous System Infections.
  - 2.1.7.1. General Characteristics.
  - 2.1.7.2. Classification.
- 2.1.8. Cerebrospinal Fluid Circulation and its Alterations.
  - 2.1.8.1. General Characteristics.
  - 2.1.8.2. Disorders.
- 2.1.9. Global Summary.
- 2.2. Cognitive Functions I: Attention, Perception and Memory.
  - 2.2.1. Introduction to Cognitive Functions.
  - 2.2.2. Warning System.
    - 2.2.2.1. Concept.
    - 2.2.2.2. Evaluation.
    - 2.2.2.3. Alterations.
  - 2.2.3. Attention
    - 2.2.3.1. Focused/selective Attention.
      - 2.2.3.1.1. Concept.
      - 2.2.3.1.2. Evaluation.
      - 2.2.3.1.3. Abnormalities
    - 2.2.3.2. Sustained Attention.
      - 2.2.3.2.1. Concept.
      - 2.2.3.2.2. Evaluation.
      - 2.2.3.2.2. Alterations.



- 2.2.3.3. Alternate Care.
  - 2.2.3.3.1. Concept.
  - 2.2.3.3.2. Evaluation.
  - 2.2.3.3.3. Alterations.
- 2.2.3.4. Divided Attention.
  - 2.2.3.4.1. Concept.
  - 2.2.3.4.2. Evaluation.
  - 2.2.3.4.3. Alterations.
- 2.2.4. Memory
  - 2.2.4.1. Concept.
  - 2.2.4.2. Process.
  - 2.2.4.3. Classification.
  - 2.2.4.4. Evaluation.
  - 2.2.4.5. Alterations.
- 2.2.5. Perception.
  - 2.2.5.1. Concept.
  - 2.2.5.2. Evaluation.
  - 2.2.5.3. Alterations.
- 2.3. Cognitive Functions II: Language and Executive Functions.
  - 2.3.1. Conceptualization of Executive Functions.
  - 2.3.2. Evaluation of Executive Functions.
  - 2.3.3. Alterations of Executive Functions.
  - 2.3.4. Dorsolateral Prefrontal Syndrome.
  - 2.3.5. Orbitofrontal Syndrome.
  - 2.3.6. Mesial Frontal Syndrome.
  - 2.3.7. Conceptualization of Language.
  - 2.3.8. Language Assessment.
  - 2.3.9. Language Disorders.
- 2.4. Neuropsychological Assessment.
  - 2.4.1. Introduction.
  - 2.4.2. Objectives of the Neuropsychological Evaluation.
  - 2.4.3. Variables influencing the Evaluation.
  - 2.4.4. Diffuse Vs. Local Brain Damage.
    - 2.4.5. Location and Size of the Lesion.
    - 2.4.6. Depth of the Lesion.
    - 2.4.7. Distant Effects of the Injury.
    - 2.4.8. Disconnection Syndrome.
    - 2.4.9. Time of Evolution of the Lesion.
    - 2.4.10. Intrinsic Patient-related Intrinsic Variables.
    - 2.4.11. Quantitative Vs. Qualitative Evaluation.
    - 2.4.12. Stages in the Neuropsychological Evaluation Process.
    - 2.4.13. Clinical History and Establishment of Therapeutic Relationship.
    - 2.4.14. Test Administration and Correction.
    - 2.4.15. Analysis and Interpretation of the Results, Preparation of the Report and Return of the Information.
- 2.5. Neuropsychological Rehabilitation and its Application in Speech Therapy.
  - 2.5.1. Neuropsychological Rehabilitation I: Cognitive Functions.
    - 2.5.1.1. Introduction.
  - 2.5.2. Attention and Perception.
    - 2.5.2.1. Training of the Attentional Process.
    - 2.5.2.2. Effectiveness.
    - 2.5.2.3. Virtual Reality
  - 2.5.3. Memory
    - 2.5.3.1. Basic Principles.
    - 2.5.3.2. Memory Strategies.
    - 2.5.3.3. Virtual Reality
  - 2.5.4. Praxias.
    - 2.5.4.1. Strategies for Stimulation.
    - 2.5.4.2. Specific Tasks.
  - 2.5.5. Language
    - 2.5.5.1. General Advice.
    - 2.5.5.2. Specific Tasks.
  - 2.5.6. Executive Functions (FF.EE.)
    - 2.5.6.1. General Advice.
    - 2.5.6.2. Stimulation of the FF.EE.
      - 2.5.6.2.1. Sohlberg and Mateer.

- 2.5.6.2.2. Techniques for Treatment of Executive Deficits.
- 2.5.6.3. Specific Tasks.
- 2.5.6.4. Effectiveness.
- 2.5.7. Summary.
- 2.5.8. Bibliography.
- 2.6. Behavioral Rehabilitation and its Application in Speech Therapy.
  - 2.6.1. Introduction.
    - 2.6.1.1. E-R-C Reference Model.
    - 2.6.1.2. Orientations/currents.
    - 2.6.1.3. Characteristics of Behavior Modification.
    - 2.6.1.4. Behavior Modification Techniques: General Use/Specific Use.
  - 2.6.2. Behavioral Assessment: Observation.
    - 2.6.2.1. Define Target Behavior.
    - 2.6.2.2. Select Measurement Method.
    - 2.6.2.3. Record Sheets.
    - 2.6.2.4. Contextual Aspects of What is Observed.
  - 2.6.3. Operant Techniques: Development of Behaviors.
    - 2.6.3.1. Introduction.
    - 2.6.3.2. Theoretical Concepts.
    - 2.6.3.3. Reinforcement Programs.
    - 2.6.3.4. Molded.
    - 2.6.3.5. Chaining.
    - 2.6.3.6. Fading.
    - 2.6.3.7. Negative Reinforcement.
    - 2.6.3.8. Scope of Application.
  - 2.6.4. Operant Techniques: Reduction of Behaviors.
    - 2.6.4.1. Introduction.
    - 2.6.4.2. Extinction.
    - 2.6.4.3. Time Out.
    - 2.6.4.4. Response Cost.
    - 2.6.4.5. Scope of Application.
  - 2.6.5. Operant Techniques: Contingency Organization Systems.
    - 2.6.5.1. Introduction.
    - 2.6.5.2. Token Economy.



- 2.6.5.3. Behavioral Contracts.
- 2.6.5.4. Scope of Application.
- 2.6.6. Modeling Techniques.
  - 2.6.6.1. Introduction.
  - 2.6.6.2. Procedure.
  - 2.6.6.3. Modeling Techniques.
  - 2.6.6.4. Areas of Applications.
- 2.6.7. Frequent behaviour in the Logopedic Field.
  - 2.6.7.1. Impulsive.
  - 2.6.7.2. Apathy.
  - 2.6.7.3. Disinhibition.
  - 2.6.7.4. Anger or Aggressiveness.
- 2.6.8. Conclusion.
- 2.7. Rehabilitation in Occupational Therapy and its Application in Speech Therapy.
  - 2.7.1. Occupational Therapy.
  - 2.7.2. Influence of Body Posture on Speech Therapy.
  - 2.7.3. Body Posture.
  - 2.7.4. Adaptations to Body Posture.
  - 2.7.5. Neurorehabilitation Techniques: BOBATH, AFFOLTER, BASAL STIMULATION.
  - 2.7.6. Adaptations/supportive Products Useful in Speech Therapy Rehabilitation.
  - 2.7.7. Objective of Occupational Therapy as an Integrating Medium.
- 2.8. Child Neuropsychology.
  - 2.8.1. Introduction.
  - 2.8.2. Child Neuropsychology: Definition and General Fundamentals.
  - 2.8.3. Etiology.
    - 2.8.3.1. Genetic and Environmental Factors.
    - 2.8.3.2. Classification.
      - 2.8.3.2.1. Neurodevelopment Disorders
      - 2.8.3.2.2. Acquired Brain Injury.
  - 2.8.4. Neuropsychological Assessment.
    - 2.8.4.1. General Aspects and Evaluation Phases.
    - 2.8.4.2. Assessment Tests
  - 2.8.5. Neuropsychological Intervention.
    - 2.8.5.1. Family Intervention.
    - 2.8.5.2. Intervention in the Educational Field.
- 2.8.6. Development of Cognitive Functions.
  - 2.8.6.1. Early Childhood (0-2 years).
  - 2.8.6.2. Preschool Period (2-6 years).
  - 2.8.6.3. School Period (6-12 years).
  - 2.8.6.4. Adolescence (12-20 years).
- 2.8.7. Conclusions.
- 2.8.8. Bibliography.
- 2.9. Family Approach and Therapy.
  - 2.9.1. Introduction.
  - 2.9.2. Family Care in the Acute and Subacute Phase.
    - 2.9.2.1. Acute Phase Hospital Stay.
    - 2.9.2.2. Subacute Phase: The Return Home.
    - 2.9.2.3. What about after Rehabilitation?
  - 2.9.3. The Family as Part of the Rehabilitation Process.
  - 2.9.4. Needs Raised by the Family during the Rehabilitation Process.
  - 2.9.5. The Rehabilitation Team.
  - 2.9.6. Conclusions.
  - 2.9.7. Bibliography.
- 2.10. Example of Transdisciplinary Rehabilitation: Clinical Case.
  - 2.10.1. Clinical Case.
  - 2.10.2. Theories of a TCE.
  - 2.10.3. Broca's Aphasia. Pathological Correlates and Associated Alterations in Broca's Aphasia.
  - 2.10.4. Neuropsychological Evaluation.
  - 2.10.5. Neuropsychological Profile.
  - 2.10.6. Results
  - 2.10.7. Deficits and Potentials.
  - 2.10.8. Course and Treatment of the Injury.
  - 2.10.9. Specific Objectives for Patients with Broca's Aphasia.
  - 2.10.10. Basic Fundamentals of Rehabilitation.



### Module 3. OMT (Orofacial / Myofunctional Therapy) and Early Childhood Care

- 3.1. Neonatal Development.
  - 3.1.1. Evolutionary Development in Neonates.
  - 3.1.2. NBAS. Evaluation of Neonatal Behavior.
  - 3.1.3. Early Diagnosis.
  - 3.1.4. Neurological Diagnosis.
  - 3.1.5. Habituation.
  - 3.1.6. Oral Motor Reflexes.
  - 3.1.7. Body Reflexes.
  - 3.1.8. Vestibular System.
  - 3.1.9. Social and Interactive Media.
  - 3.1.10. Use of NBAS in High Risk Newborns.
- 3.2. Child Feeding Disorders.
  - 3.2.1. Feeding Processes.
  - 3.2.2. Physiology of Pediatric Swallowing.
  - 3.2.3. Skill Acquisition Phases.
  - 3.2.4. Deficits.
  - 3.2.5. Multidisciplinary Work.
  - 3.2.6. Alert Symptomatology.
  - 3.2.7. Premature Orofacial Development.
  - 3.2.8. Power Supply Routes: Parenteral, Enteral, Tube, Gastrectomy, Oral (Diet with or without modification).
  - 3.2.9. Gastroesophageal Reflux.
- 3.3. Neurodevelopment and Infant Feeding.
  - 3.3.1. Embryonic development
  - 3.3.2. Appearance of Main Primary Functions.
  - 3.3.3. Risk Factors.
  - 3.3.4. Evolutionary Milestones.
  - 3.3.5. Synaptic Function.
  - 3.3.6. Immaturity.
  - 3.3.7. Neurological Maturity.
- 3.4. Brain-motor Skills.
  - 3.4.1. Innate Orofacial Motor Skills.
  - 3.4.2. Evolution of Orofacial Motor Patterns.
  - 3.4.3. Reflex Swallowing.
  - 3.4.4. Reflex Breathing.
  - 3.4.5. Reflex Suction.
  - 3.4.6. Evaluation of Infant Oral Reflexes.
- 3.5. Breastfeeding.
  - 3.5.1. Early Start.
  - 3.5.2. Impact at the Orofacial Level.
  - 3.5.3. Exclusivity.
  - 3.5.4. Optimal Nutrition.
  - 3.5.5. Spontaneous Maturation of Oral Musculature.
  - 3.5.6. Muscle Mobility and Synergy.
  - 3.5.7. Position.
  - 3.5.8. Therapeutic Recommendations.
  - 3.5.9. Intellectual Development.
  - 3.5.10. Intervention Programs
- 3.6. Early Feeding Techniques.
  - 3.6.1. Newborn Feeding.
  - 3.6.2. Positioning Techniques.
  - 3.6.3. Signs of Good Standing.
  - 3.6.4. Key Therapeutic Recommendations.
  - 3.6.5. Dairy and Non-Dairy Formulas.
  - 3.6.6. Classification of Formulas.
  - 3.6.7. Bottle Use Techniques.
  - 3.6.8. Techniques of Spoon Use.
  - 3.6.9. Techniques for the Use of low-cut Glass.
  - 3.6.10. Techniques of Use with Probe or Use of Alternative Feeding Systems.
- 3.7. Speech Therapy Intervention in Neonates.
  - 3.7.1. Evaluation of Primary Functions.
  - 3.7.2. Re-education of Primary Neuromotor Dysfunctions.
  - 3.7.3. Primary Intervention.
  - 3.7.4. Individual Treatment Planning and Coordination.
  - 3.7.5. Oral Motor Exercise Program I.
  - 3.7.6. Oral Motor Exercise Program II.

- 3.7.7. Intervention with Families.
- 3.7.8. Early Motor Activation.
- 3.8. Alteration in Infantile Swallowing. Block 1
  - 3.8.1. Intake Analysis.
  - 3.8.2. Assessment of Orofacial Structure and Functionality.
  - 3.8.3. Malnutrition.
  - 3.8.4. Respiratory Infections. Airway Unit.
  - 3.8.5. Airway Unit.
  - 3.8.6. Complementary Exploration.
  - 3.8.7. Quantitative Exploration.
  - 3.8.8. Nutritional Treatment.
  - 3.8.9. Adaptive Treatment. Posture, Texture, Materials.
  - 3.8.10. Performance Program.
- 3.9. Rehabilitative Treatment of Pediatric Oropharyngeal and Esophageal Dysphagia.
  - 3.9.1. Symptoms
  - 3.9.2. Etiology.
  - 3.9.3. Child with Neurological Damage. High Probability of Presenting Alteration.
  - 3.9.4. Dysphagia in the Infant.
  - 3.9.5. Phases of Normalized Swallowing in Pediatrics Vs. Pathological Swallowing.
  - 3.9.6. Neurological Maturity: Cognitive, Emotional and Motor Coordination.
  - 3.9.7. Impossibility of Oral Feeding.
  - 3.9.8. Early Care. High Probability of Recovery.
- 3.10. Alteration in Infantile Swallowing. Block 2
  - 3.10.1. Types. Neuroanatomical and Behavioral Classification.
  - 3.10.2. Functional Maturational Dysphagia.
  - 3.10.3. Degenerative Diseases.
  - 3.10.4. Cardiorespiratory Pathologies.
  - 3.10.5. Congenital Brain Damage.
  - 3.10.6. Childhood Acquired Brain Injury (CBAI).
  - 3.10.7. Craniofacial Syndromes.
  - 3.10.8. Autism Spectrum Disorders.



*A unique, key, and decisive master's degree experience to boost your professional development"*

05

# Methodology

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

This teaching system is used 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 Nursing School we use the Case Method

In a given clinical situation, what would you do? Throughout the program, you will be presented with multiple simulated clinical cases based on real patients, where you will have to investigate, establish hypotheses and, finally, resolve the situation. There is an abundance of scientific evidence on the effectiveness of the method. Nurses learn better, faster, and more sustainably over time.

*With TECH, nurses can experience a learning methodology 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, in an attempt to recreate the real conditions in professional nursing 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:

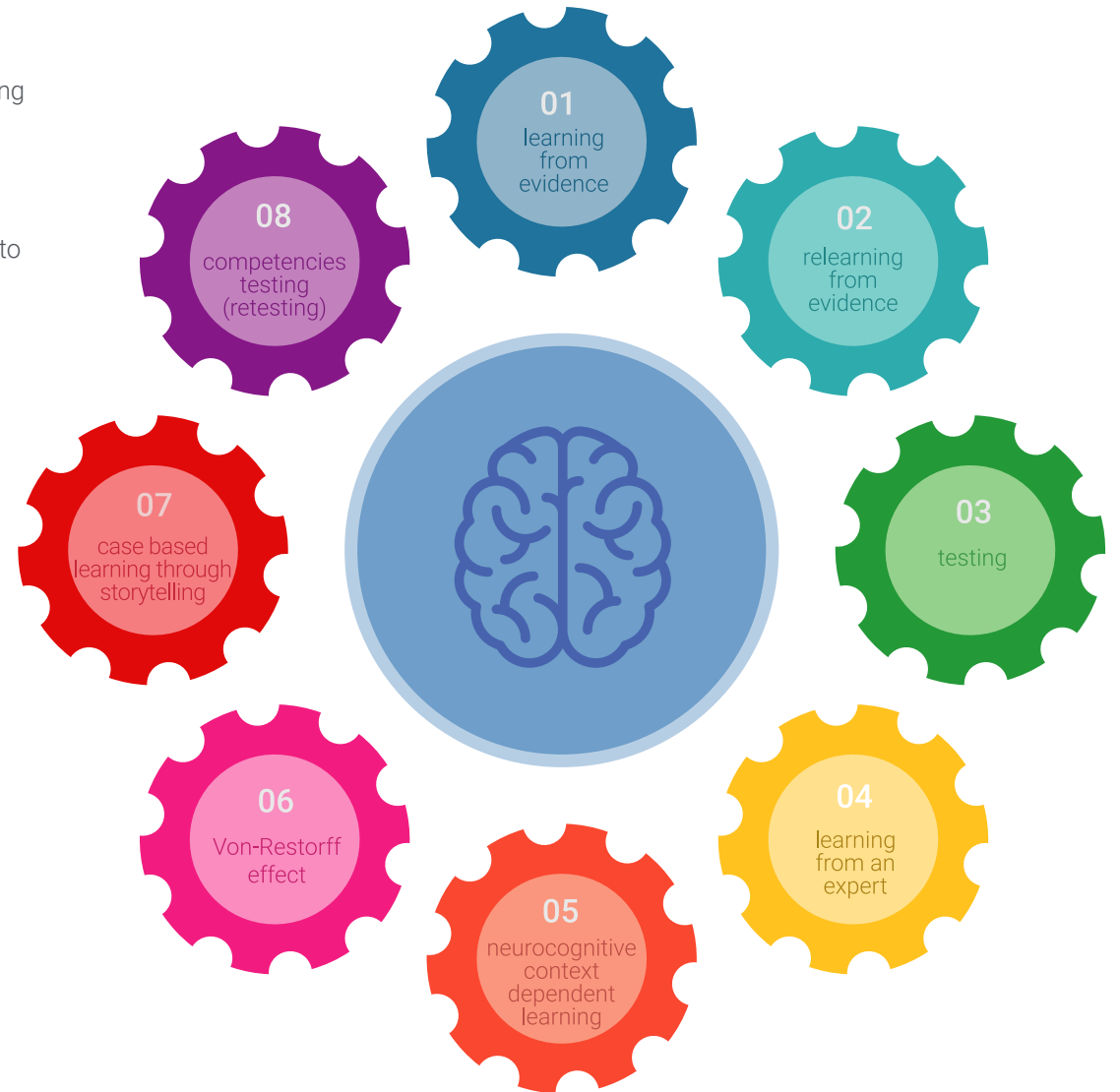
1. Nurses who follow this method not only grasp concepts, but also develop their mental capacity by evaluating real situations and applying their knowledge.
2. The learning process has a clear focus on practical skills that allow the nursing professional to better integrate knowledge acquisition into the hospital setting or primary care.
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 university program.



## 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 nurse 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 175,000 nurses with unprecedented success, in all specialties regardless of from the workload. All this in a highly demanding environment, where the students have a strong socio-economic profile and an average age of 43.5 years.

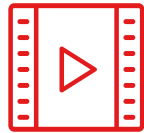
*Re-learning will allow you to learn with less effort and better performance, involving you more in your specialization, developing a critical mindset, defending arguments, and contrasting opinions: a direct equation to success.*

In our program, learning is not a linear process, but rather a spiral (we 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.



In this Postgraduate Diploma you will have access to the best educational materials, prepared for you:



#### Study Material

After a complex production process, we transform the best content into high-quality educational and audiovisual multimedia. We select the best syllabus and make it available to you. Everything you need to acquire in-depth knowledge of a discipline, from A to Z. Lessons written and chosen by specialists in each of the disciplines.



#### Video Education Techniques and Procedures

We introduce you to the latest techniques, with the latest educational advances, and at the forefront of education. All this, in first person, 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.



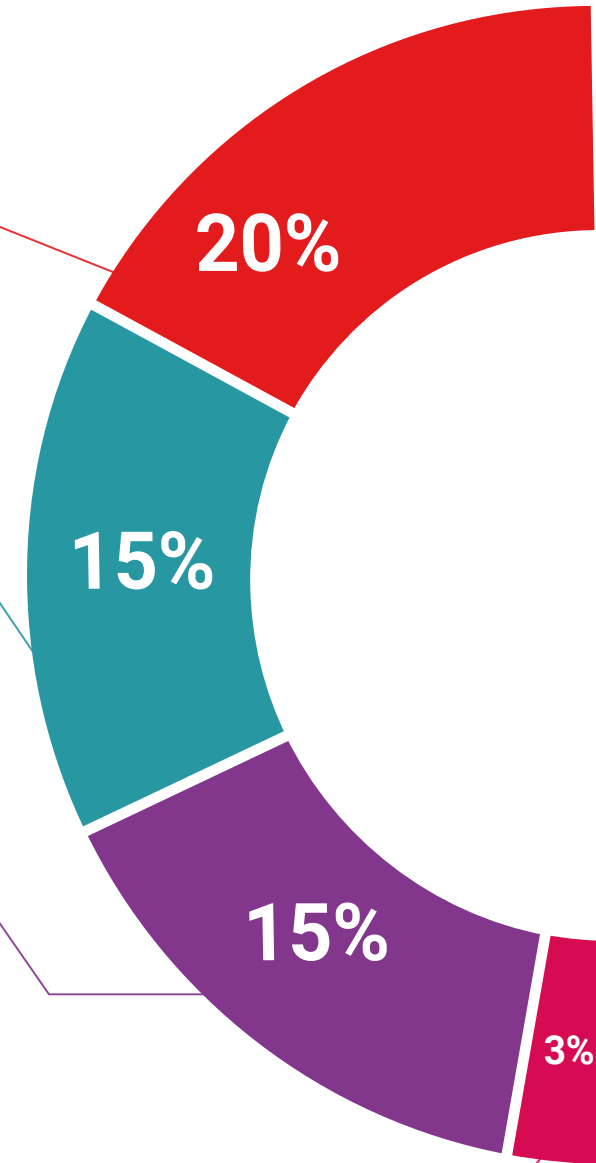
#### Interactive Summaries

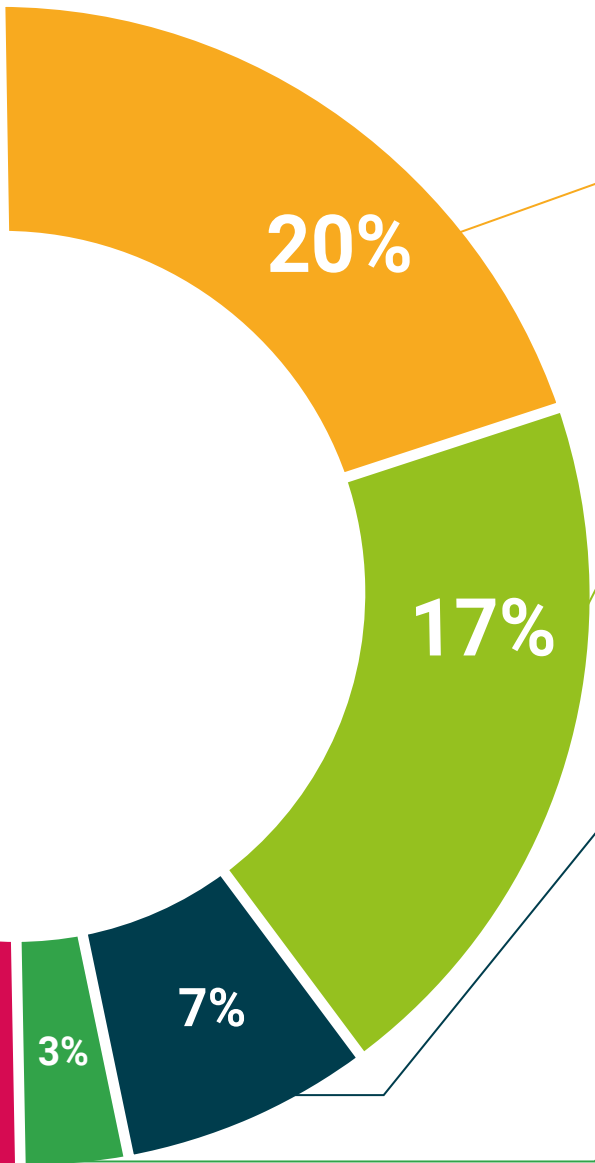
We present the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge. This unique training system for presenting multimedia content was awarded by Microsoft as a "European Success Story".



#### Additional Reading

Recent articles, consensus documents, international guides... in our virtual library you will have access to everything you need to complete your training.





**Expert-led case studies and case analysis**

Through the narratives of expert professionals, it is possible to acquire a high degree of understanding of the most frequent problematic situations. The professional's healthcare practice is not alien to the context in which it takes place. If we want to train ourselves to improve our professional practice, this training must be situated within the context in which it takes place.



**Testing & Retesting**

We periodically evaluate and re-evaluate your knowledge throughout this program through activities and evaluative exercises.



**Classes**

There is scientific evidence suggesting that observing third-party experts can be useful. Learning from an expert strengthens knowledge and recall, and generates confidence in our future difficult decisions



**Quick Action Guides**

One of the most important functions of our team is to select those contents considered essential and present them in the form of worksheets or quick action guides to facilitate their understanding.





06

# Certificate

The Postgraduate Diploma in Logopedic Neurorehabilitation and Early Intervention for Nurses guarantees you, in addition to the most rigorous and up to date specialization, access to a Postgraduate Diploma issued by TECH Global University.





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*Successfully complete this specialization and receive your certificate without the hassle of travel or paperwork ”*

This private qualification will allow you to obtain a **Postgraduate Diploma in Logopedic Neurorehabilitation and Early Intervention for Nurses** endorsed by **TECH Global University**, the world's largest online university.

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

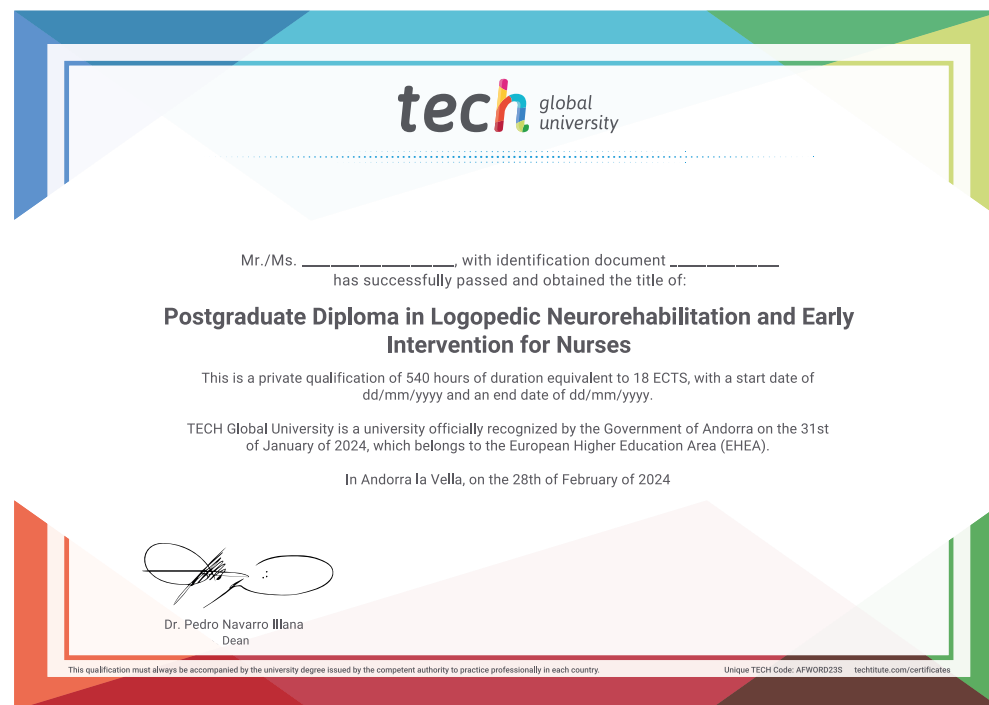
This **TECH Global University** private qualification is a European program of continuing education and professional updating that guarantees the acquisition of competencies in its area of knowledge, providing a high curricular value to the student who completes the program.

Title: **Postgraduate Diploma in Logopedic Neurorehabilitation and Early Intervention for Nurses**

Modality: **online**

Duration: **6 months**

Accreditation: **18 ECTS**



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

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institutions technology learning  
community commitment  
personalized service innovation  
knowledge present  
online training  
development language  
classroom



**Postgraduate Diploma**  
Logopedic Neurorehabilitation  
and Early Intervention  
for Nurses

- » Modality: online
- » Duration: 6 months
- » Certificate: TECH Global University
- » Credits: 18 ECTS
- » Schedule: at your own pace
- » Exams: online

# Postgraduate Diploma

Logopedic Neurorehabilitation  
and Early Intervention for Nurses