

# Hybrid Professional Master's Degree

Logopedic and Orofacial  
Neurorehabilitation  
for Nursing





## Hybrid Professional Master's Degree

### Logopedic and Orofacial Neurorehabilitation for Nursing

Course Modality: Hybrid (Online + Clinical Internship)

Duration: 12 months

Certificate: TECH Technological University

Teaching Hours: 1,620 h.

Website: [www.techtitute.com/pk/nursing/hybrid-professional-master-degree/hybrid-professional-master-degree-logopedic-orofacial-neurorehabilitation-nursing](http://www.techtitute.com/pk/nursing/hybrid-professional-master-degree/hybrid-professional-master-degree-logopedic-orofacial-neurorehabilitation-nursing)

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# 01

# Introduction

The tools for Logopedic and Orofacial Neurorehabilitation are becoming more complex, as are the protocols for supervising and monitoring the condition of patients suffering from specific disorders such as Aphasia. In this context, Nursing professionals must keep abreast of the latest trends in myofunctional therapy and therefore expand their ability to assess the effects of particular protocols. Achieving this continuous updating is not easy and, for this reason, TECH offers a program composed of two distinct stages. In the first, the nurse will develop a 100% online learning, from a platform with numerous interactive features. This will be followed by a first-class practical and face-to-face stay in a prestigious hospital center, equipped with the latest resources and an excellent staff of experts.



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*Update all your practical skills in Nursing for Logopedic and Orofacial Neurorehabilitation with this Hybrid Professional Master's Degree in TECH"*

Science and technology have advanced rapidly in recent years, allowing the development of effective neurological and orofacial neurorehabilitation protocols to enhance the work of nurses. Professionals in this field must be up to date on a wide variety of innovative methods, techniques and therapies. In this way, the Nursing staff will be able to contribute significantly to the evaluation and improvement of patients with pathologies such as Aphasia and Hypophonia. However, keeping up to date in these areas is a challenge, as there are not many educational programs that cover all the new developments in this area.

Faced with this scenario, TECH has developed a Hybrid Professional Master's Degree that combines theory and practice in this field in an innovative way. For this purpose, the degree consists of two phases of 1500 hours of learning in a 100% online format. Through this syllabus, the graduate will review different methods of care that apply to Nursing personnel and the strategies where they are most effective. In order to assimilate all this knowledge quickly and flexibly, they have innovative methodologies such as Relearning and a wide variety of multimedia materials.

After that stage, you will carry out a 3-week intensive on-site stay in state-of-the-art hospitals. In this way, they will be able to access real patients and the specialized guidance of prestigious experts. At the same time, an assistant tutor will monitor progress and insert dynamic practical tasks for the acquisition of competencies. In this way, TECH provides you with the most necessary skills to take your career as a nurse to the highest level of excellence.

This **Hybrid Professional Master's Degree in Logopedic and Orofacial Neurorehabilitation for Nursing** contains the most complete and up-to-date scientific program on the market.

The most important features include:

- ◆ Development of more than 100 clinical cases presented by nursing professionals
- ◆ Its graphic, schematic and eminently practical contents, which are designed to provide scientific and assistance information on those medical disciplines that are essential for professional practice
- ◆ Presentation of practical workshops on procedures, diagnosis, and treatment techniques in critical patients
- ◆ An algorithm-based interactive learning system for decision-making in the clinical situations presented throughout the course
- ◆ Practical clinical guides on approaching different pathologies
- ◆ All this will be complemented by theoretical lessons, questions to the expert, debate forums on controversial topics, and individual reflection assignments
- ◆ Content that is accessible from any fixed or portable device with an Internet connection
- ◆ In addition, you will be able to carry out a clinical internship in one of the best hospitals in the world



*Get the most demanded competences in the field of Nursing dedicated to orofacial rehabilitation through this very complete program"*

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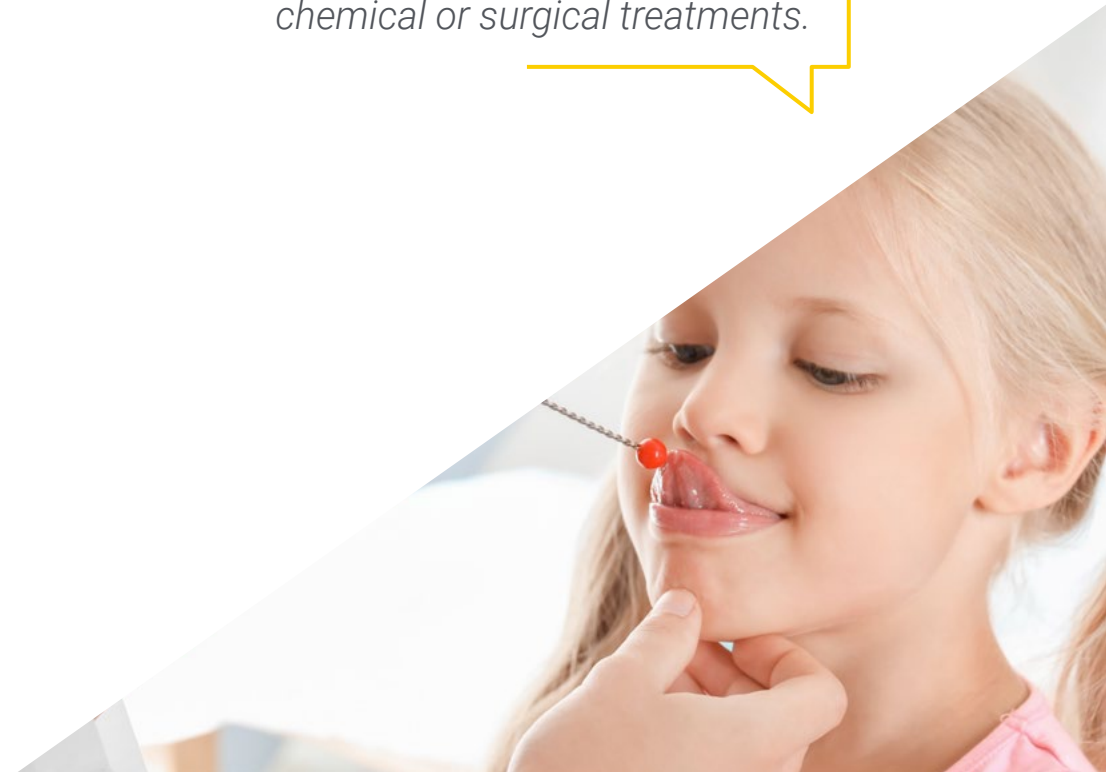
*Through TECH Technological University you will be able to update your skills as a nurse in Logopedic Neurorehabilitation with 1,500 hours of theoretical learning and 3 weeks of practical, intensive and face-to-face training”*

In this proposed Hybrid Professional Master's Degree, of a professionalizing nature and blended learning modality, the program is aimed at updating nursing professionals who require a high level of qualification. The content is based on the latest scientific evidence and is organized in a didactic way to integrate theoretical knowledge into nursing practice. The theoretical-practical elements allow professionals to update their knowledge and help them to make the right decisions in patient care.

Thanks to their multimedia content developed with the latest educational technology, they will allow the nursing professional to obtain situated and contextual learning, i.e., a simulated environment that will provide immersive learning programmed to train in real situations. This program is designed around Problem-Based Learning, whereby the physician must try to solve the different professional practice situations that arise during the course. For this purpose, the student will be assisted by an innovative interactive video system created by renowned experts.

*Thanks to TECH, you will be an updated nurse trained to detect alterations in breathing, swallowing, chewing and phonation patterns in pediatric patients.*

*With the study of this degree, you will be able to monitor and assess the condition of people with swallowing disorders after undergoing chemical or surgical treatments.*



02

# Why Study this Hybrid Professional Master's Degree?

This program combines theoretical learning with the development of practical skills in an exceptional way. In it, the nurse will have the opportunity to acquire new competencies from an online and interactive learning platform during 1,500 didactic hours. To reinforce these skills, you will undertake a high-level practical internship in prestigious hospital centers, applying state-of-the-art care to ensure that graduates are equipped with a rigorous update through which they will meet the main challenges of this field of work.







Why Study this Hybrid Professional | 09  
Master's Degree?



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*Don't wait any longer and enroll with TECH:  
the best option in the educational market  
where practical and theoretical learning is  
combined for the practice of Nursing"*

### 1. Upgrade to the Latest Available Technology

Thanks to advances in the development of Neurostimulation and Neurofeedback devices, increasingly innovative care protocols have been created. This degree offers nurses the opportunity to apply these strategies in their daily practice through the most rigorous updating of the moment. In this way, they will be able to complete the development of new competencies quickly and flexibly.

### 2. Gaining In-Depth Knowledge from the Experience of Top Specialists

During the two learning phases that make up this Hybrid Professional Master's Degree, the nurse will have access to the best experts. First of all, you will have at your disposal an excellent faculty that will clarify doubts and concepts of interest in the theoretical stage. In addition, in clinical practice, it will work directly with distinguished professionals in the most renowned and competitive hospital centers.

### 3. Entering First-Class Clinical Environments

For the practical training of this program, TECH has made a thorough selection of hospital facilities. In this way, the nurse will have access to first level environments, where they will be able to use the latest technologies. At the same time, you will be guided by prestigious experts who will help you update your knowledge in the most efficient and immediate way.





#### 4. Combining the Best Theory with State-of-the-Art Practice

During a 3 week stay in a prestigious hospital center, the nurse will put into practice everything they have learned in the theoretical phase of this Hybrid Professional Master's Degree. Therefore, from the very beginning, you will evaluate and supervise real cases with different speech and swallowing disorders.

#### 5. Expanding the Boundaries of Knowledge

TECH, the world's largest online university, aspires to provide all its students with a first-class education, in accordance with the most up-to-date international standards. Therefore, the professional who is studying this Hybrid Professional Master's Degree will have the opportunity to choose different medical centers for their practical stay, which will be located in different cities.



*You will have full hands-on immersion  
at the center of your choice"*

# 03

## Objectives

TECH has designed this Hybrid Professional Master's Degree program to train the Nursing professional in the latest innovations in Logopedic and Orofacial Neurorehabilitation. The program consists of two academic stages where the student will become familiar with the most recent procedures and techniques relevant to their field of work. In the first, you will access the necessary theoretical knowledge from an excellent online learning platform. Afterwards, you will complete a 120-hour practical internship, where you will apply the knowledge acquired on real patients and with the advice of the best experts.



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*Improve your ability to manage pediatric patients with speech disorders and become a sought-after nurse for the workplace”*



## General Objective

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- This degree provides the most up-to-date competencies in current principles of speech-language assessment in Nursing. It also delves into rehabilitation techniques supported by the latest clinical research and state-of-the-art neurofunctional diagnostic procedures. In addition, the program looks especially at disorders affecting breathing, phonation and swallowing and how health care professionals can contribute to their resolution



*You will broaden your nursing practice with this program that perfectly combines theoretical learning with an intensive face-to-face stay"*





## Specific objectives

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

- ◆ Know how the brain has been studied throughout history since antiquity
- ◆ Study the basis of the nervous system in order to understand how the brain works
- ◆ Detail the stages of embryological development of the nervous system in general terms
- ◆ 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 child and adult populations in clinical practice
- ◆ Study the different functions performed by the autonomic nervous system
- ◆ Know the characteristics that constitute motor control

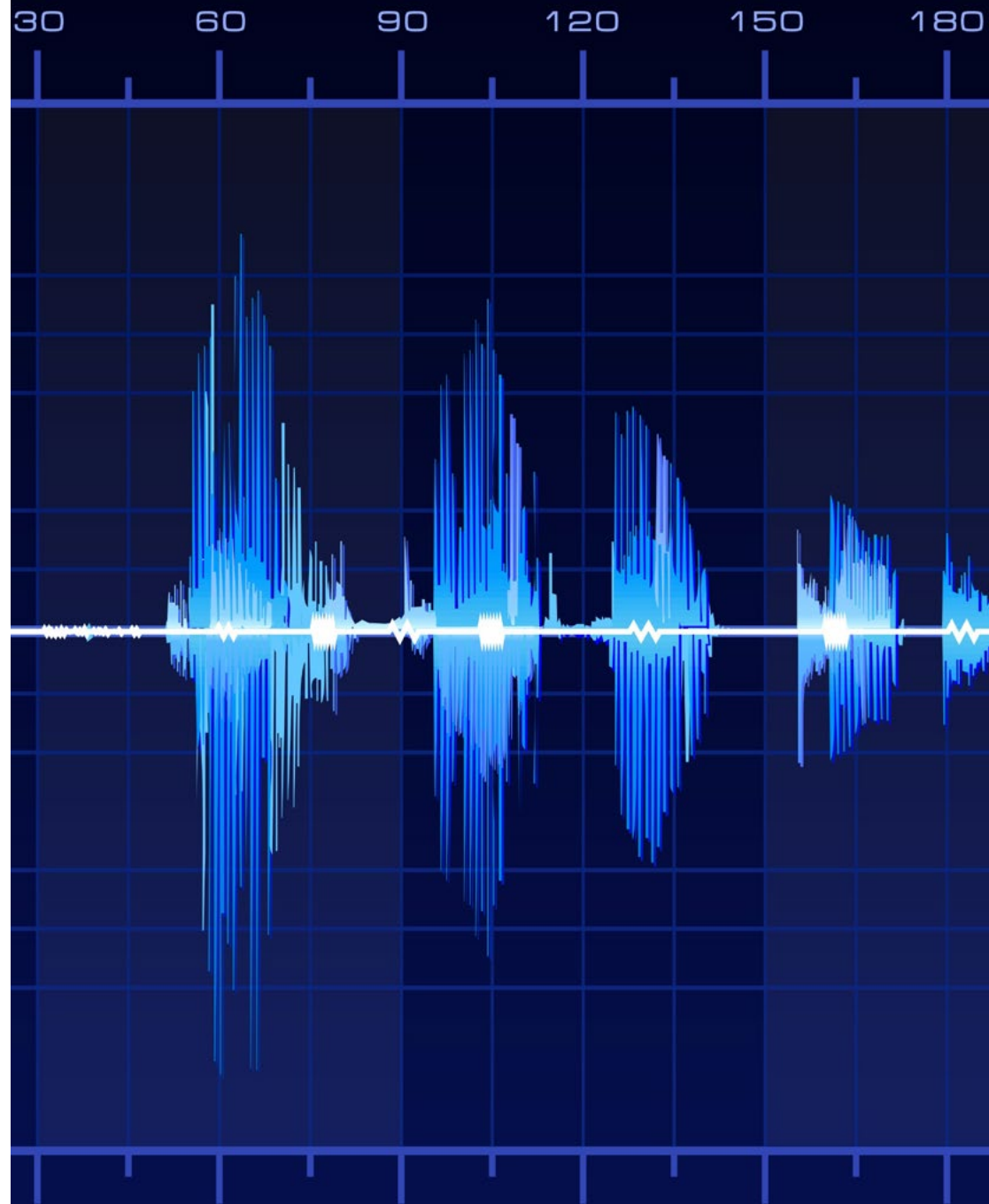
## Module 2. Introduction to Neurorehabilitation II: Relationship with Logopedic Treatment

- ◆ Know the different diseases of brain damage as a basis for neuropsychological exploration
- ◆ Know the basic cognitive functions
- ◆ Know how to conceptualize the functions of attention, memory and perception
- ◆ Know classifications, processes and systems
- ◆ Acquire basic knowledge of the assessment tests used
- ◆ Know the main alterations of the functions studied here
- ◆ Acquire an approach to the knowledge of executive functions and language
- ◆ Know what neuropsychological rehabilitation consists of and how to approach each cognitive function
- ◆ Know different behavior modification techniques (BCT)
- ◆ Develop some basic notions of how to apply BCT
- ◆ Acquire tools to act in the face of behavioral disorders
- ◆ Know how to apply BCT to speech therapy for improved results
- ◆ Know the clinical implication of occupational therapy in speech therapy rehabilitation
- ◆ Know the role of families during the rehabilitation process

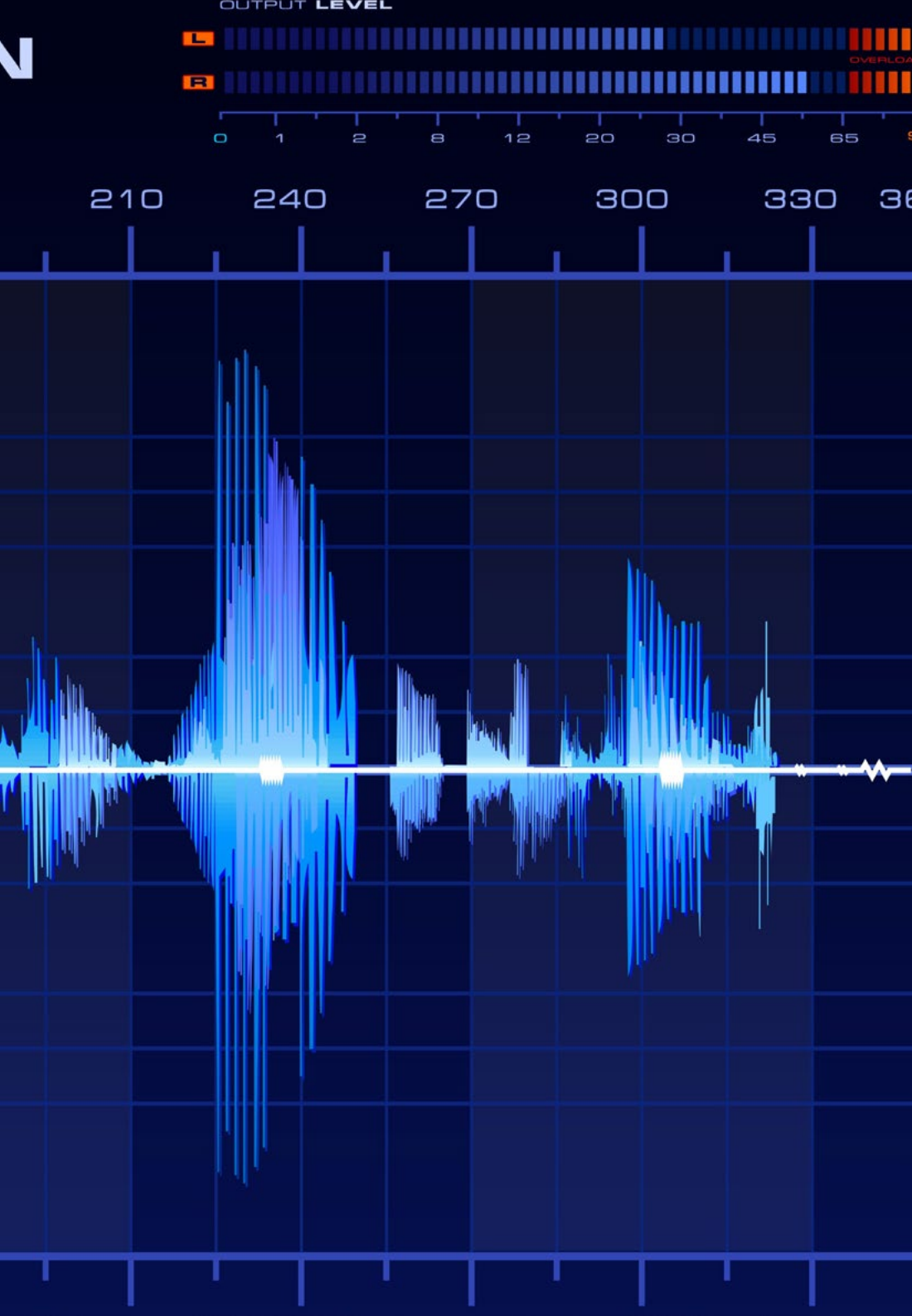
## Module 3. Anatomy and Physiology of the Voice Vocal Chord Status

- ◆ Learn how to implement a correct and complete assessment of vocal function in daily clinical practice
- ◆ Understand the specific anatomical and functional aspects of the phonatory system as a basis for the rehabilitation of vocal pathologies and for vocal work with voice professionals
- ◆ Know the most important features of the voice and learn to listen to different types of voices in order to know which aspects are altered to guide clinical practice

# SPEECH RECOGNITION







#### Module 4. Vocal Rehabilitation

- ◆ Gain in-depth knowledge of the most current diagnostic and treatment techniques
- ◆ Analyze the different possible vocal pathologies and achieve scientific rigor in treatments
- ◆ Solve real case studies with current therapeutic approaches based on scientific evidence
- ◆ Delve into the knowledge and analysis of the results obtained in objective voice assessments
- ◆ Learn about different approaches to the treatment of vocal pathologies
- ◆ Raise awareness of the need for vocal care
- ◆ View the voice as a global ability of the person and not as an exclusive act of the phonatory system

#### Module 5. Orofacial Myofunctional Therapy (OMT) and Early Care

- ◆ Understand oral-facial behavior in children, both innate and acquired
- ◆ Recognize correct motor patterns in swallowing, breathing and sucking
- ◆ Detect functional alteration in diet early
- ◆ Understand the importance of oro-facial growth and vegetative functions development at the pediatric level
- ◆ Detect the signs of proper posture and apply them in different positions for breastfeeding
- ◆ Learn how to use alternative techniques in infant diets
- ◆ Learn to manage the different intervention strategies at the orofacial level in pediatric age in children with swallowing disorders
- ◆ Know and develop action plans during diet that can be helpful in first instance with a high chance of success
- ◆ Create feeding programs adapted and individualized to each case in a preventive, re-educative and rehabilitative way

### **Module 6. Assessment and Intervention in Dysphagia of Neurological Origin in Adults**

- ◆ Learn the anatomy and physiology of swallowing
- ◆ Provide anatomical and physiological knowledge of the structures involved in normal and pathological swallowing
- ◆ Learn the functional basis of dysphagia to classify it and know the pathologies associated with this disorder
- ◆ Know the scales of assessment, exploration and instrumental techniques
- ◆ Develop strategies to assess dysphagia before, during and after the speech therapy intervention
- ◆ Learn to assess the nutritional status of patients with dysphagia and the consequences of poor hydration and malnutrition
- ◆ Learn compensatory techniques as opposed to rehabilitative techniques
- ◆ Train in the comprehensive approach to dysphagia of neurological origin

### **Module 7. Dentistry and Orofacial Disorder**

- ◆ Know the function of structures involved in breathing, chewing and swallowing
- ◆ Recognize dentomaxillary abnormalities
- ◆ Relate, complement and coordinate the work between dentistry and speech therapy
- ◆ Know orthodontic appliances
- ◆ Know and assess the functions of the orofacial system and their interrelationship
- ◆ Recognize when swallowing is dysfunctional
- ◆ Elaborate orofacial-myofunctional assessment protocols





### **Module 8. Feeding in ASD (Autism Spectrum Disorder)**

- ◆ Develop competencies that favor the evaluation of Orofacial System alterations in Congenital Neurological Disorders
- ◆ Improve the quality of life of neurological patients by improving their eating habits
- ◆ Broaden knowledge and consolidate the bases of infantile gold motor functioning
- ◆ Create programs for new habits and routines directly related to special needs student diets in order to improve their quality of life both at a personal and a social level
- ◆ Improve the intake quality in Parent-Child Interaction (PCI) during feeding to offer greater safety and efficiency in each intake

### **Module 9. Feeding in Congenital Neurological Disorder**

- ◆ Know the concept of ASD and how sensory profiles influence diet
- ◆ Study possible strategies for dealing with feeding difficulties
- ◆ Learn how to develop work programs that enhances feeding function
- ◆ Provide support strategies for understanding the context through visual, tactile and auditory support
- ◆ Generate practical tools to be implemented in natural contexts
- ◆ To promote the creation of individualized, flexible feeding programs based on the interests of the child with autism

# 04 Skills

This Hybrid Professional Master's Degree will allow the Nursing professional to implement methods of evaluation and monitoring of patients with speech and swallowing disorders. In particular, the program provides the most updated competencies on the latest advances in neurorehabilitation, allowing to follow more closely and with greater attention the different neurological affectations that occur.





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*This degree provides you with state-of-the-art practical skills to detect and assess different alterations of the orofacial system and proceed to report them to the medical specialist”*



## General Skills

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- ♦ Possess and understand knowledge that provides a basis or opportunity to be original in the development and/or application of ideas, often in a research context
- ♦ Know how to apply acquired knowledge and problem-solving skills in new or unfamiliar environments within broader (or multidisciplinary) contexts related to the field of study
- ♦ Be able to integrate knowledge and face the complexity of making judgments based on incomplete or limited information, including reflections on the social and ethical responsibilities linked to the application of their knowledge and judgments
- ♦ Know how to communicate your findings to specialized and non-specialized audiences in a clear and unambiguous manner
- ♦ Acquire the learning skills that will enable further studying in a largely self-directed or autonomous manner





## Specific Skills

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- Use the logopedic terminology in TOM and its derived fields of intervention, through the use of semiology as a basis for the understanding of all professional activities
- Detect, evaluate and explore the different orofacial system disorders at a structural level, taking into account the basic and vital functions (breathing, swallowing, chewing and sucking) to re-educate or rehabilitate patients toward optimal neuromuscular function and an adequate muscular balance during growth and development
- Create work teams during myofunctional intervention, making joint decisions and assessments of the evolution of the case
- Being aware of the importance of making referrals to different health professionals such as pediatricians, stomatologists, speech therapists, otolaryngologists, neurologists, dentists, physiotherapists, occupational therapists, nurses, etc
- Create prevention programs for the different orofacial and myofunctional disorders and alterations
- Explore, assess, diagnose and make a prognosis of the evolution of orofacial alterations from a multidisciplinary approach
- Study, know and learn to use the different exploration techniques and instruments suitable for functional health, educational or clinical practice
- Put into practice the different types of orofacial intervention in an optimized way and adapted to each case according to etiology and motor development
- Develop attitudes capable of advising and guiding families and healthcare, clinical and educational agents involved in each case Use assertiveness and clarity to obtain optimal interaction
- Define the profession's limits and competences, and learn well-founded good practices
- Establish channels of communication, collaboration and coordination with healthcare and social agents
- Elaborate and write referral and speech therapy evaluation reports at the orofacial level, in a direct, clear and complete manner
- Perform speech therapy intervention in all the required areas, applying principles of coherent intervention and with professional skill



*After this program, you will have state-of-the-art skills in orofacial logopedic assessment reporting and become one of the most up-to-date nurses in the field"*

05

# Course Management

TECH has selected the leading experts in Logopedic and Orofacial Neurorehabilitation for Nursing to teach this blended Hybrid Professional Master's Degree. All of them have extensive experience in health care and, based on the results obtained in their careers, have developed an excellent syllabus. Through this curriculum, professionals will gain an understanding of complex theoretical concepts and their application in the assessment and monitoring of patients under nursing supervision. Therefore, this program becomes a very complete didactic option for the updating of widely requested competencies.







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*TECH, for this Hybrid Professional Master's Degree, has chosen excellent teachers with extensive professional experience as nurses in the field of Logopedic Neurorehabilitation"*

## Management



### Dr. Borrás Sanchís, Salvador

- ♦ Psychologist, Teacher and Speech Therapist
- ♦ Educational Counselor at Generalitat Valenciana, Consejería de Educación (Valencian Regional Government)
- ♦ Abile Education Specialist
- ♦ Partner of Avance SL
- ♦ Pedagogical Advisor and External Collaborator of Aula Salud (an organization to promote health in the classroom)
- ♦ Pedagogical Director at iteNlearning
- ♦ Author of the Guide for the re-education of atypical swallowing and associated disorders
- ♦ Pedagogical Director in the Instituto DEIAP (Institute for Comprehensive Development and Psychoeducational Care)
- ♦ Degree in Psychology
- ♦ Hearing and Speech Teacher
- ♦ Diploma in Speech Therapy

## Professors

### Ms. Álvarez Valdés, Paula del Carmen

- ♦ Specialist in Diagnosis and Treatment of Early Childhood Care
- ♦ Clinical Speech Therapist Specialist in Myofunctional Therapy
- ♦ Diploma in Psychodiagnosis and Early Care Treatment
- ♦ Direct collaboration in Dental Office
- ♦ Graduate in Logopedics
- ♦ Master's Degree in Special Education and Foreign Language from the Pontifical University of Salamanca
- ♦ Master's Degree in Myofunctional Therapy of ISEP

### Dr. Carrasco de Larriva, Concha

- ♦ Cognitive Rehabilitation and Clinical Neuropsychology Expert
- ♦ Psychologist at PEROCA
- ♦ Clinical Neuropsychologist accredited by the General Council of Psychology in Spain
- ♦ Assistant Professor of the Department of Psychology at the Catholic University San Antonio of Murcia
- ♦ Master in Clinical Neuropsychology by the Spanish Association of Clinical Cognitive Behavioral Psychology
- ♦ Expert in Child and Cognitive Rehabilitation by the Francisco de Vitoria University
- ♦ Postgraduate in Cognitive Rehabilitation by the ISEP
- ♦ Degree in Psychology from the University of Granada
- ♦ Qualified for the evaluation of Autism with the Autism Diagnostic Observation Scale (ADOS)

### Ms. Gallego Díaz, Mireia

- ♦ Hospital Logopedic Therapist
- ♦ Occupational Therapist
- ♦ Logopedic Therapist Expert in Swallowing Disorders

### Ms. Garcia Gomez, Andrea Maria

- ♦ Logopedic Therapist Specialist in Acquired Brain Injury Neurorehabilitation
- ♦ Logopedic therapist at UNER Clinic
- ♦ Logopedic therapist at Integra Brain Injury
- ♦ Logopedic therapist at Ineuro
- ♦ Graduate in Logopedics
- ♦ Master's Degree in Logopedic Neurorehabilitation in Acquired Cerebral Damage

### Ms. Jiménez Jiménez, Ana

- ♦ Clinical Neuropsychologist and Social Worker
- ♦ Clinical Neuropsychologist at Integra Brain Injury
- ♦ Neuropsychologist at UNER Clinic
- ♦ Educator of the Murcia Social Action Team in Cáritas Española
- ♦ Degree in Social Work from the University of Murcia
- ♦ Degree in Psychology from the National University of Distance Education (UNED)
- ♦ Master's Degree in Clinical Neuropsychology from the European University Miguel de Cervantes
- ♦ Master's Degree in General Health Psychology from the National University of Distance Education (UNED)

**Ms. López Samper, Belén**

- ♦ General Health Psychology and Clinical Neuropsychologist
- ♦ Psychologist at the Alcaraz Institute
- ♦ Psychologist at IDEAT Center
- ♦ Neuropsychologist at the UNER Clinic - Comprehensive Evaluation and Rehabilitation of Brain Injury
- ♦ Specialized in Child and Adult Neurorehabilitation at the Integral Center for Brain Injury
- ♦ Master's Degree in Special Educational Needs and Early Childhood Care, Developmental and Child Psychology from the International University of Valencia
- ♦ Master's Degree in Clinical Neuropsychology by the Spanish Association of Clinical Cognitive Behavioral Psychology (AEPCCC)
- ♦ Master's Degree in General Health Psychology from the International University of Valencia
- ♦ Degree in Psychology from the Miguel Hernandez University of Elche

**Ms. Martín Bielsa, Laura**

- ♦ Director of Multidisciplinary Center Dime Más
- ♦ CFP Estill Voice Training
- ♦ Degree in Logopedics
- ♦ Diploma in Teaching
- ♦ Dean of the Professional Association of Logopedists of Aragon

**Ms. Santacruz García, Estefanía**

- ♦ Social Integration and Clinical Logopedist at the Uner Clinic
- ♦ CEFIRE Teacher
- ♦ Specialist in Orofacial and Myofunctional Therapy

**Ms. Muñoz Boje, Rocío**

- ♦ Occupational Therapist Specialist in Neurorehabilitation
- ♦ Occupational Therapist Specialist in Neurorehabilitation at the Under Clinic
- ♦ Degree in Occupational Therapy

**Ms. Navarro Marhuenda, Laura**

- ♦ Neuropsychologist at Kinemas Center
- ♦ Specialist in Child and Adult Neurorehabilitation at the Integral Center for Brain Injury
- ♦ Author of the Master in Logopedic Neurorehabilitation and Vital Functions Analysis
- ♦ Neuropsychologist at INEURO
- ♦ Neuropsychologist in the Uner Clinic
- ♦ Degree in Psychology from the Miguel Hernandez University of Elche
- ♦ Master's Degree in Health Psychology from the Miguel Hernández University of Elche
- ♦ Master's Degree in Clinical Neuropsychology from the European University Miguel de Cervantes
- ♦ Master in Pediatric Neurology and Neurodevelopment by CEU Cardena Herrera University

**Ms. Selva Cabañero, Pilar**

- ♦ Obstetric-Gynecological Nurse Specialist (Midwife)
- ♦ Obstetric-Gynecological Nursing Teaching Unit of the University of Murcia Santa Lucía General University Hospital
- ♦ Publication of Ankyloglossia and the success of breastfeeding, with ISBN13: 978- 84- 695- 5302- 2. 2012



**Ms. Santacruz García, Raquel**

- ◆ Pedagogy and Nutrition Specialist
- ◆ Dietitian of the Ballet Hispanico Company
- ◆ Dancer at the Andalusian Center of Dance
- ◆ Certificate and Graduate in Human Nutrition and Dietetics from the Catholic University of San Antonio
- ◆ Specialist in Dance Pedagogy from the Institut del Teatre de Barcelona
- ◆ Intermediate Degree in Classical Dance at the Murcia Conservatory of Music

**Mr. Santacruz García, José Luis**

- ◆ Psychologist specializing in Congenital and Acquired Brain Injury

**Ms. Sanz Pérez, Nekane**

- ◆ Clinical Speech Therapist specialized in Acquired Cerebral Palsy
- ◆ Teacher at Iberocardio for Aspace (Main Confederation and Entity for Cerebral Palsy Care in Spain)



*Don't miss this opportunity and enroll with TECH to have access to the most qualified teaching staff in the education sector"*

# 06

## Educational Plan

This curriculum, designed for nurses, includes a wide variety of modules and topics of academic interest. They cover the fundamentals of Logopedic and Orofacial Neurorehabilitation, based on the most updated techniques and tools. In this way, participants are offered a first class update, based on the latest scientific discoveries in this area. Likewise, the didactic methodology used integrates innovative methods such as Relearning, as well as multimedia resources such as videos, infographics and interactive summaries. Thanks to these elements, graduates will be able to assimilate the contents and apply them more efficiently in their daily practice.



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*In this curriculum you will deepen as a nurse about the different intervention strategies at the orofacial level in pediatric age in children with swallowing disorders"*

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

- 1.1. History of Brain Discovery
  - 1.1.1. Introduction
  - 1.1.2. Stages in Brain History: Mind vs. Brain
    - 1.1.2.1. From Antiquity to the 2nd Century
    - 1.1.2.2. From the 2nd to the 17th Century
    - 1.1.2.3. From the 19th Century to the Present
  - 1.1.3. A Modern Vision of the Brain
  - 1.1.4. Neuropsychological Rehabilitation
  - 1.1.5. Conclusions
  - 1.1.6. Bibliography
- 1.2. Introduction to the Nervous System
  - 1.2.1. Introduction
  - 1.2.2. Neurons
    - 1.2.2.1. Cell Anatomy
    - 1.2.2.2. Cell Functions
    - 1.2.2.3. Classification of Neurons
    - 1.2.2.4. Support Cells or Glia
  - 1.2.3. Transmitting Information
    - 1.2.3.1. Action Potentials
      - 1.2.3.1.1. Resting Potential
      - 1.2.3.1.2. Action Potential
      - 1.2.3.1.3. Postsynaptic Potential, Local or Graded
  - 1.2.4. Neuronal 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 in 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 Newborns: Reflexes
  - 1.3.5. Warning 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. Irrigation of the CNS
    - 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. Mesencephalon or Midbrain
        - 1.4.3.4.2.4. Prosencephalon or Forebrain
  - 1.4.4. Conclusions
  - 1.4.5. Bibliography



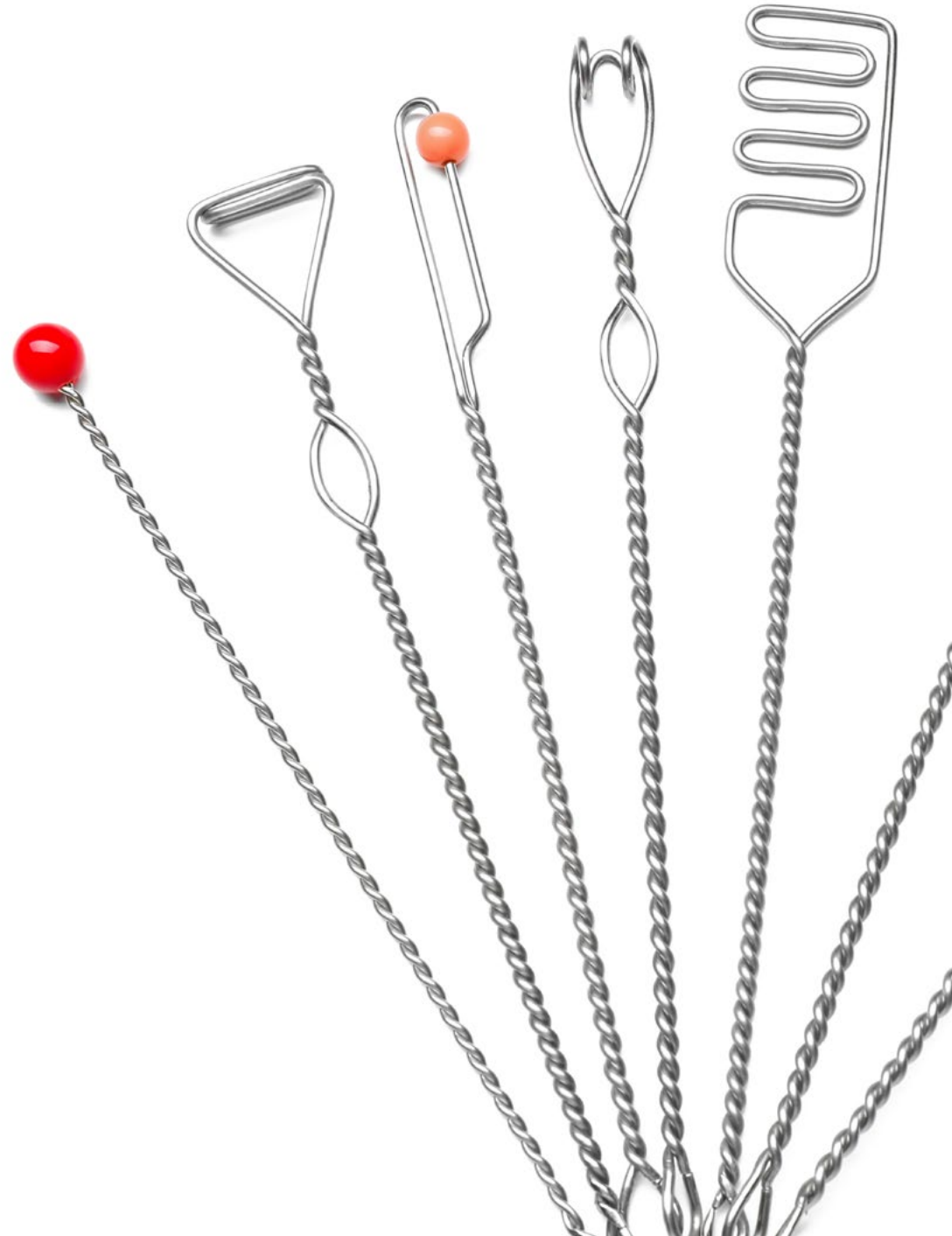
- 1.5. Structural and Functional Organization of the Cerebral Cortex
  - 1.5.1. Introduction
  - 1.5.2. Brodmann Map
  - 1.5.3. Cerebral Hemispheres and Cerebral Cortex: Structural Organization
    - 1.5.3.1. Circumvolutions and Main Sulci: Cerebral Lobes
    - 1.5.3.2. Structure of the Cerebral Cortex
    - 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 Cord Pathways
  - 1.6.3. Anatomical Organization
  - 1.6.4. Functions and Lesions of the Ascending Pathways
  - 1.6.5. Descending Cord Pathways
  - 1.6.6. Anatomical Organization
  - 1.6.7. Descending Tract Functions
  - 1.6.8. Descending Tract Lesions
  - 1.6.9. Sensory Receptors
  - 1.6.10. Anatomical Types of Receptors
- 1.7. Cranial Nerves
  - 1.7.1. Essential Basic Vocabulary
  - 1.7.2. History
  - 1.7.3. Introduction
  - 1.7.4. Nerve Components
  - 1.7.5. Classification of Cranial Nerves
  - 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. Plexus
  - 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. General Aspects
  - 1.9.3. ANS Functions
  - 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. ANS Disorders
- 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 Impairment
  - 1.10.7. Global Summary

## Module 2. Introduction to Neurorehabilitation II: Relation with Logopedic Treatment

- 2.1. Etiology of Brain Damage
  - 2.1.1. Introduction
  - 2.1.2. Vascular Disorders
    - 2.1.2.1. Occlusive Syndromes
    - 2.1.2.2. Types of Cerebrovascular Disease
    - 2.1.2.3. Neuropsychological Disorders in CVA
  - 2.1.3. Intracranial Neoplasms
    - 2.1.3.1. General Characteristics
    - 2.1.3.2. Tumor Classification
    - 2.1.3.3. Neuropsychological Disorders in Tumours
  - 2.1.4. Cranioencephalic Trauma (CET)
    - 2.1.4.1. General Characteristics
    - 2.1.4.2. Types of CET
    - 2.1.4.3. CET Disorders
  - 2.1.5. Neurodegenerative Diseases
    - 2.1.5.1. General Characteristics
    - 2.1.5.2. Types and Disorders
  - 2.1.6. Epilepsy
    - 2.1.6.1. General Characteristics
    - 2.1.6.2. 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 Disorders
    - 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. Alertness System
    - 2.2.2.1. Concept
    - 2.2.2.2. Assessment
    - 2.2.2.3. Abnormalities
  - 2.2.3. Attention
    - 2.2.3.1. Focused/Selective Attention
      - 2.2.3.1.1. Concept
      - 2.2.3.1.2. Assessment
      - 2.2.3.1.3. Abnormalities
    - 2.2.3.2. Sustained Attention
      - 2.2.3.2.1. Concept
      - 2.2.3.2.2. Assessment
      - 2.2.3.2.3. Abnormalities
    - 2.2.3.3. Alternating Attention
      - 2.2.3.3.1. Concept
      - 2.2.3.3.2. Assessment
      - 2.2.3.3.3. Abnormalities
    - 2.2.3.4. Divided attention
      - 2.2.3.4.1. Concept
      - 2.2.3.4.2. Assessment
      - 2.2.3.4.3. Abnormalities
  - 2.2.4. Memory
    - 2.2.4.1. Concept
    - 2.2.4.2. Process
    - 2.2.4.3. Classification
    - 2.2.4.4. Assessment
    - 2.2.4.5. Abnormalities
  - 2.2.5. Perception
    - 2.2.5.1. Concept
    - 2.2.5.2. Assessment
    - 2.2.5.3. Abnormalities

- 2.3. Cognitive Functions II: Language and Executive Functions
  - 2.3.1. Conceptualization of Executive Functions
  - 2.3.2. Executive Functions Assessment
  - 2.3.3. Executive Function Disorders
  - 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 Evaluation
  - 2.3.9. Language Impairment
- 2.4. Neuropsychological Assessment
  - 2.4.1. Introduction
  - 2.4.2. Neuropsychological Assessment Objectives
  - 2.4.3. Assessment Variables
  - 2.4.4. Diffuse Brain Damage vs. Local
  - 2.4.5. Injury Location and Size
  - 2.4.6. Injury Depth
  - 2.4.7. Distant Effects of the Injury
  - 2.4.8. Disconnection Syndrome
  - 2.4.9. Injury Time Evolution
  - 2.4.10. Intrinsic Patient-Related Variables
  - 2.4.11. Quantitative Evaluation vs. Qualitative
  - 2.4.12. Stages in Neuropsychological Assessment
  - 2.4.13. Clinical History and Establishing Therapeutic Relationships
  - 2.4.14. Test Administration and Correction
  - 2.4.15. Analyzing and Interpreting Results, Preparing Reports and Returning Information
- 2.5. Neuropsychological Rehabilitation and Speech Therapy Applications
  - 2.5.1. Neuropsychological Rehabilitation I: Cognitive Functions
    - 2.5.1.1. Introduction
  - 2.5.2. Attention and Perception
    - 2.5.2.1. Training Attention Processes
    - 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. Apraxias
    - 2.5.4.1. Stimulation Strategies
    - 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. EF Stimulation
      - 2.5.6.2.1. Sohlberg and Mateer
      - 2.5.6.2.2. Executive Deficit Treatment Techniques
    - 2.5.6.3. Specific Tasks
    - 2.5.6.4. Effectiveness
  - 2.5.7. Summary
  - 2.5.8. Bibliography
- 2.6. Behavioural Rehabilitation and Speech Therapy Applications
  - 2.6.1. Introduction
    - 2.6.1.1. ERC Reference Model
    - 2.6.1.2. Orientations/Currents
    - 2.6.1.3. Behavior Modification Characteristics
    - 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. Choose Measurement Methods
    - 2.6.2.3. Record Sheets
    - 2.6.2.4. Contextual Aspects of What Is Observed

- 2.6.3. Operant Techniques: Behavioral Development
  - 2.6.3.1. Introduction
  - 2.6.3.2. Theoretical Concepts
  - 2.6.3.3. Reinforcement Programs
  - 2.6.3.4. Molding
  - 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: Behavior Reduction
  - 2.6.4.1. Introduction
  - 2.6.4.2. Extinction
  - 2.6.4.3. Time Off
  - 2.6.4.4. Cost of Response
  - 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. Scope of Application
- 2.6.7. Frequent Behavior in Logopedics
  - 2.6.7.1. Impulsiveness
  - 2.6.7.2. Apathy
  - 2.6.7.3. Disinhibition
  - 2.6.7.4. Anger or Aggressiveness
- 2.6.8. Conclusions



- 2.7. Rehabilitation in Occupational Therapy and Speech Therapy Applications
  - 2.7.1. Occupational Therapy
  - 2.7.2. Body Posture in Speech Therapy
  - 2.7.3. Body Posture
  - 2.7.4. Adaptations in Body Posture
  - 2.7.5. Techniques in Neurorehabilitation: Bobath, Affolter, Basal Stimulation
  - 2.7.6. Adaptations/Support Products Useful in Speech Therapy Rehabilitation
  - 2.7.7. Objective of Occupational Therapy as a Means of Integration
- 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 Assessment Phase
    - 2.8.4.2. Evaluation Tests
  - 2.8.5. Neuropsychological Intervention
    - 2.8.5.1. Family Intervention
    - 2.8.5.2. Educational Intervention
  - 2.8.6. Cognitive Function Development
    - 2.8.6.1. First Childhood (0-2 Years of Age)
    - 2.8.6.2. Preschool Period (2-6 Years of Age)
    - 2.8.6.3. School Period (6-12 Years of Age)
    - 2.8.6.4. Adolescence (12-20 Years of Age)
  - 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: 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 Posed by the Family during the Rehabilitation Process
  - 2.9.5. The Rehabilitation Team
  - 2.9.6. Conclusions
  - 2.9.7. Bibliography
- 2.10. A Transdisciplinary Rehabilitation Example: Clinical Case
  - 2.10.1. Clinical Cases
  - 2.10.2. CET Theories
  - 2.10.3. Broca's Aphasia: Pathological Correlates and Associated Alterations in Broca's Aphasia
  - 2.10.4. Neuropsychological Assessment
  - 2.10.5. Neuropsychological Profile
  - 2.10.6. Results
  - 2.10.7. Deficits and Potentials
  - 2.10.8. Injury Course and Treatment
  - 2.10.9. Specific Objectives for Patients with Broca's Aphasia
  - 2.10.10. Fundamentals of Rehabilitation

### Module 3. Anatomy and Physiology of the Voice Vocal Chord Status

- 3.1. Voice Anatomy
  - 3.1.1. Laryngeal Anatomy
  - 3.1.2. Respiratory Structures Involved in Phonation
    - 3.1.2.1. Chest
    - 3.1.2.2. Airway
    - 3.1.2.3. Respiratory Musculature
  - 3.1.3. Laryngeal Structures Involved in Phonation
    - 3.1.3.1. Laryngeal Skeleton
    - 3.1.3.2. Cartilage
    - 3.1.3.3. Joints
    - 3.1.3.4. Musculature
    - 3.1.3.5. Innervation
  - 3.1.4. Structures of the Vocal Tract Involved in Phonation
    - 3.1.4.1. Linear Source-Filter Model
    - 3.1.4.2. Non-Linear Source-Filter Model
- 3.2. Voice Physiology
  - 3.2.1. Histology of Vocal Folds
  - 3.2.2. Biomechanical Properties of the Vocal Folds
  - 3.2.3. Myoelastic Mucocondulatory Theory and Aerodynamic Theory
- 3.3. Pathological Voice
  - 3.3.1. Euphonia vs. Dysphonia
  - 3.3.2. Vocal Fatigue
  - 3.3.3. Acoustic Signs of Dysphonia
  - 3.3.4. Classification of Dysphonia
- 3.4. Medical- Surgical Treatment
  - 3.4.1. Phonosurgery
  - 3.4.2. Laryngeal Surgery
  - 3.4.3. Medication in Dysphonia
- 3.5. Physical and Acoustic Aspects
  - 3.5.1. Physical Aspects of the Voice
    - 3.5.1.1. Types of Waves
    - 3.5.1.2. Physical Properties of Sound Waves: Amplitude and Frequency
    - 3.5.1.3. Transmission of Sound
  - 3.5.2. Acoustic Voice Aspects
    - 3.5.2.1. Intensity
    - 3.5.2.2. Pitch
    - 3.5.2.3. Quality
- 3.6. Objective Voice Assessment
  - 3.6.1. Morphofunctional Exploration
  - 3.6.2. Electroglottography
  - 3.6.3. Aerodynamic Measures
  - 3.6.4. Electromyography
  - 3.6.5. Videochemography
  - 3.6.6. Acoustic Analysis
- 3.7. Perceptual Assessment
  - 3.7.1. GRBAS
  - 3.7.2. RASAT
  - 3.7.3. GBR Score
  - 3.7.4. CAPE-V
  - 3.7.5. VPAS
- 3.8. Functional Assessment
  - 3.8.1. Fundamental Frequency
  - 3.8.2. Phonetogram
  - 3.8.3. Maximum Phonatory Times
  - 3.8.4. Velo-Palatine Efficiency
  - 3.8.5. VHI

- 3.9. Assessing Vocal Quality
  - 3.9.1. Vocal Quality
  - 3.9.2. High Quality Voice vs. Low Quality Voice
  - 3.9.3. Vocal Quality Assessment in Voice Professionals
- 3.10. Medical History
  - 3.10.1. The Importance of the Medical Record
  - 3.10.2. Characteristics of the Initial Interview
  - 3.10.3. Medical History Sections and Voice Implications
  - 3.10.4. Proposal of a Model of Anamnesis for Vocal Pathology

#### Module 4. Vocal Rehabilitation

- 4.1. Speech Therapy Treatment for Functional Dysphonias
  - 4.1.1. Type I: Isometric Laryngeal Disorder
  - 4.1.2. Type II: Glottic and Supraglottic Lateral Contraction
  - 4.1.3. Type III: Anteroposterior Supraglottic Contraction
  - 4.1.4. Type IV: Conversion Aphonia/Dysphonia and Psychogenic Dysphonia with Arched Vocal Cords
  - 4.1.5. Transitional Adolescent Dysphonia
- 4.2. Speech Therapy Treatment for Organic Dysphonia
  - 4.2.1. Introduction
  - 4.2.2. Speech Therapy in Congenital Origin Dysphonias
  - 4.2.3. Speech Therapy in Acquired Origin Dysphonias
- 4.3. Speech Therapy Treatment for Organic-Functional Dysphonias
  - 4.3.1. Introduction
  - 4.3.2. Objectives in the Rehabilitation of Organic-Functional Pathologies
  - 4.3.3. Proposal of Exercises and Techniques according to the Rehabilitation Objective
- 4.4. Voice in Acquired Neurological Problems
  - 4.4.1. Dysphonias of Neurological Origin
  - 4.4.2. Speech Therapy Treatment
- 4.5. Child Dysphonia
  - 4.5.1. Anatomical Characteristics
  - 4.5.2. Vocal Characteristics
  - 4.5.3. Intervention

- 4.6. Hygiene Therapy
  - 4.6.1. Introduction
  - 4.6.2. Harmful Habits and Their Effect on the Voice
  - 4.6.3. Preventive Measures
- 4.7. Semi-Occluded Vocal Tract Exercises
  - 4.7.1. Introduction
  - 4.7.2. Justification
  - 4.7.3. TVSO
- 4.8. Estill Voice Training
  - 4.8.1. Jo Estill and the Creation of the Model
  - 4.8.2. Principles of Estill Voice Training
  - 4.8.3. Description

#### Module 5. Orofacial/Myofunctional Therapy (OMT) and Early Care

- 5.1. Neonatal Development
  - 5.1.1. Neonatal Development
  - 5.1.2. NBAS: Neonatal Behavioral Assessment
  - 5.1.3. Early Diagnosis
  - 5.1.4. Neurologic Diagnosis
  - 5.1.5. Habituation
  - 5.1.6. Oral Motor Reflexes
  - 5.1.7. Body Reflexes
  - 5.1.8. Vestibular System
  - 5.1.9. Social and Interactive Media
  - 5.1.10. Use of NBAS in High-Risk Newborns
- 5.2. Eating Disorders in Children
  - 5.2.1. Feeding Processes
  - 5.2.2. Pediatric Swallowing Physiology
  - 5.2.3. Phases in Skill Acquisition
  - 5.2.4. Deficits
  - 5.2.5. Multidisciplinary Work
  - 5.2.6. Warning Symptomatology

- 5.2.7. Premature Orofacial Development
- 5.2.8. Feeding routes: Parenteral, Enteral, Tube, Gastrectomy, Oral (diet with or without modification)
- 5.2.9. Gastroesophageal Reflux
- 5.3. Neurodevelopment and Infant diets
  - 5.3.1. Embryonic Development
  - 5.3.2. Appearance of Main Primary Functions
  - 5.3.3. Risk Factors
  - 5.3.4. Evolutionary Milestones
  - 5.3.5. Synaptic Function
  - 5.3.6. Immaturity
  - 5.3.7. Neurological Maturity
- 5.4. Brain-Motor Skills
  - 5.4.1. Innate Orofacial Motor Skills
  - 5.4.2. Evolution of Orofacial Motor Patterns
  - 5.4.3. Reflex Swallowing
  - 5.4.4. Reflex Breathing
  - 5.4.5. Reflex Suction
  - 5.4.6. Assessing Infant Oral Reflexes
- 5.5. Nursing
  - 5.5.1. Early Start
  - 5.5.2. Impact at the Orofacial Level
  - 5.5.3. Exclusivity
  - 5.5.4. Optimal Nutrition
  - 5.5.5. Spontaneous Maturation of Oral Musculature
  - 5.5.6. Muscle Mobility and Synergy
  - 5.5.7. Position
  - 5.5.8. Therapeutic Recommendations
  - 5.5.9. Intellectual Development
  - 5.5.10. Intervention Program
- 5.6. Early Feeding Techniques
  - 5.6.1. Newborn Feeding
  - 5.6.2. Positioning Techniques
  - 5.6.3. Signs of Good Positioning
  - 5.6.4. Key Therapeutic Recommendations
  - 5.6.5. Milk and Non-Milk Formulas
  - 5.6.6. Classification of Formulas
  - 5.6.7. Bottle Feeding Techniques
  - 5.6.8. Spoon Techniques
  - 5.6.9. Techniques for Low-Cut Cup Use
  - 5.6.10. Techniques Tube Use or Alternative Feeding Systems
- 5.7. Speech Therapy Intervention in Neonates
  - 5.7.1. Primary Functions Assessment
  - 5.7.2. Re-Education of Primary Neuromotor Dysfunctions
  - 5.7.3. Primary Intervention
  - 5.7.4. Individual Treatment Planning and Coordination
  - 5.7.5. Oral Motor Exercise Program I
  - 5.7.6. Oral Motor Exercise Program II
  - 5.7.7. Intervention with Families
  - 5.7.8. Early Motor Activation
- 5.8. Child Swallowing Disorders I
  - 5.8.1. Intake Analysis
  - 5.8.2. Undernourishment
  - 5.8.3. Respiratory Infections: Airway Unit
  - 5.8.4. Complementary Explorations
  - 5.8.5. Quantitative Explorations
  - 5.8.6. Nutritional Treatment
  - 5.8.7. Adaptive Treatment: Posture, Texture, Materials
  - 5.8.8. Performance Program



- 5.9. Rehabilitative Treatment of Infant Oropharyngeal and Esophageal Dysphagia
  - 5.9.1. Symptoms
  - 5.9.2. Etiology
  - 5.9.3. Neurological Damage in Children: High Probability of Presenting a Disorder
  - 5.9.4. Infant Dysphagia
  - 5.9.5. Phases of Standardized Swallowing in Pediatrics vs. Pathological Swallowing
  - 5.9.6. Neurological Maturity: Cognitive, Emotional and Motor Coordination
  - 5.9.7. Impossibility of Oral Feeding
  - 5.9.8. Early care. High Probability of Recovering
- 5.10. Child Swallowing Disorders II
  - 5.10.1. Types. Neuroanatomical and Behavior-Based Classification
  - 5.10.2. Functional Maturational Dysphagia
  - 5.10.3. Degenerative Diseases
  - 5.10.4. Cardiorespiratory Pathologies
  - 5.10.5. Congenital Brain Damage
  - 5.10.6. Childhood Acquired Brain Injury (CABI)
  - 5.10.7. Craniofacial Syndromes
  - 5.10.8. Autism Spectrum Disorders

## Module 6. Assessment and Intervention in Dysphagia of Neurological Origin in Adults

- 6.1. Swallowing: Definition and Anatomy
  - 6.1.1. Definition of Swallowing
  - 6.1.2. Swallowing Anatomy: Structures
    - 6.1.2.1. Oral Cavity
    - 6.1.2.2. Pharynx
    - 6.1.2.3. Larynx
    - 6.1.2.4. Oesophageal
  - 6.1.3. Swallowing Anatomy: Neurological Control
    - 6.1.3.1. Central Nervous System
    - 6.1.3.2. Cranial Nerves
    - 6.1.3.3. Autonomic Nervous System
- 6.2. Swallowing: The Swallowing Process
  - 6.2.1. Phases of Swallowing
    - 6.2.1.1. Preoral Phase
    - 6.2.1.2. Oral Phase
      - 6.2.1.2.1. Oral Preparatory Phase
      - 6.2.1.2.2. Oral Transport Phase
    - 6.2.1.3. Pharyngeal Phase
    - 6.2.1.4. Esophageal Phase
  - 6.2.2. Valve System
  - 6.2.3. Biomechanics of Swallowing
    - 6.2.3.1. Swallowing Liquids
    - 6.2.3.2. Swallowing Semi-Solids
    - 6.2.3.3. Swallowing Solids: Chewing
  - 6.2.4. Breathing-Swallowing Coordination
- 6.3. Introduction to Dysphagia
  - 6.3.1. Definition
  - 6.3.2. Etiology and Prevalence
    - 6.3.2.1. Functional Causes
    - 6.3.2.2. Organic Causes
  - 6.3.3. Classification
    - 6.3.3.1. Types of Dysphagia
    - 6.3.3.2. Severity of Dysphagia
  - 6.3.4. Structural Dysphagia Differentiation vs. Neurogenic Dysphagia
  - 6.3.5. Signs and Symptoms of Dysphagia
  - 6.3.6. Safety and Efficacy Concepts
    - 6.3.6.1. Safety Complications
    - 6.3.6.2. Efficacy Complications
  - 6.3.7. Brain Damage Dysphagia
  - 6.3.8. Dysphagia in the Elderly

- 6.4. Medical Assessment of Dysphagia
  - 6.4.1. Medical Anamnesis
  - 6.4.2. Scales of Assessment and Screening
    - 6.4.2.1. EAT-10
    - 6.4.2.2. V-VST. Volume-Viscosity Swallow Test
      - 6.4.2.2.1. How to Perform the V-VST
      - 6.4.2.2.2. Useful Tips when Using V-VST
  - 6.4.3. Instrumental Tests
    - 6.4.3.1. Fibroendoscopy (FEES)
    - 6.4.3.2. Videofluoroscopy (VFS)
    - 6.4.3.3. Fibroendoscopy vs. Videofluoroscopy
    - 6.4.3.4. Pharyngoesophageal Manometry
- 6.5. Speech Therapy Assessment of Dysphagia
  - 6.5.1. Medical History
  - 6.5.2. General Patient Assessment
    - 6.5.2.1. Physical Examination
    - 6.5.2.2. Cognitive Examination
  - 6.5.3. Clinical Patient Exploration
    - 6.5.3.1. Structural Assessment
    - 6.5.3.2. Oral Motor and Sensory Examination
    - 6.5.3.3. Cranial Nerves Assessment
    - 6.5.3.4. Reflex Assessment
    - 6.5.3.5. Exploring Swallowing by Phases (without Bolus)
    - 6.5.3.6. Using Auscultation and Sound Assessment
    - 6.5.3.7. Respiratory and Phonation Assessment
  - 6.5.4. Tracheostomy Patient Assessment
  - 6.5.5. Severity and Quality of Life Scales
- 6.6. Assessment of Nutritional Status
  - 6.6.1. Importance of Nutrition
  - 6.6.2. Screening Scales in Nutrition
    - 6.6.2.1. Malnutrition Universal Screening Tool (MUST)
    - 6.6.2.2. Mini Nutritional Assessment (MNA)
    - 6.6.2.3. Nutritional Risk Screening 2002 (NRS 2002)
  - 6.6.3. Nutritional Assessment
  - 6.6.4. Undernourishment
  - 6.6.5. Dehydration
  - 6.6.6. Nutritional Supplements
  - 6.6.7. Alternatives to Oral Feeding
    - 6.6.7.1. Enteral Nutrition
      - 6.6.7.1.1. Naso/Oroenteral Tube Nutrition
      - 6.6.7.1.2. Nutrition by Gastrostomy
      - 6.6.7.1.3. Comparing Types of Enteral Nutrition
    - 6.6.7.2. Parenteral Nutrition
- 6.7. Dysphagia Rehabilitation Using Compensatory Techniques
  - 6.7.1. Rehabilitation Treatment Objectives
  - 6.7.2. Postural Techniques
  - 6.7.3. Consistency Modifications
  - 6.7.4. Modifying Intake Volume and Speed
  - 6.7.5. Modifying Food at the Perceptual Level
  - 6.7.6. New Textures
  - 6.7.7. Adapting Utensils for Intake
  - 6.7.8. Guidelines for Patients and Family
    - 6.7.8.1. Adaptation to Surroundings
    - 6.7.8.2. Drug Administration
    - 6.7.8.3. Oral Hygiene
- 6.8. Dysphagia Rehabilitation Using Rehabilitation Techniques I
  - 6.8.1. Inclusion/Exclusion Criteria in Treatments Using Rehabilitation Techniques
  - 6.8.2. Swallowing Maneuvers

- 6.8.3. Techniques to Exercise Swallowing Musculature
  - 6.8.3.1. Orofacial Myofunctional Therapy
    - 6.8.3.1.1. Soft Tissues Manipulation
    - 6.8.3.1.2. Sensory Enhancement Techniques
    - 6.8.3.1.3. Specific Exercises
      - 6.8.3.1.3.1. Language
      - 6.8.3.1.3.2. Lips/Buccinator Muscles
      - 6.8.3.1.3.3. Masticatory Muscles
      - 6.8.3.1.3.4. Palatal Veil
  - 6.8.3.2. Techniques to Stimulate Swallowing Reflex
  - 6.8.3.3. Bolus Propulsion Exercises
  - 6.8.3.4. Laryngeal Elevation (Hyoid Excursion) Exercises
  - 6.8.3.5. Exercises to Improve Glottic Closure
- 6.9. Dysphagia Rehabilitation Using Rehabilitation Techniques II
  - 6.9.1. Dysphagia Treatment based on Symptomatology
  - 6.9.2. Breathing Treatment
  - 6.9.3. Positioning
  - 6.9.4. Diet Implementation
  - 6.9.5. Use of Botulinum Toxin
  - 6.9.6. Neuromuscular Bandaging
    - 6.9.6.1. Rigid Bandages
    - 6.9.6.2. Flexible Bandages
  - 6.9.7. Electrotherapy in Swallowing
  - 6.9.8. New Technologies
- 6.10. Useful Content for Speech Therapists Working in Dysphagia
  - 6.10.1. CPR in Diet
  - 6.10.2. Diet Rheology
  - 6.10.3. Additional Information

## Module 7. Dentistry and Orofacial Disorder

- 7.1. Dentition
  - 7.1.1. Introduction
  - 7.1.2. Tooth Growth and Development
  - 7.1.3. Classification
  - 7.1.4. Primary Dentition
  - 7.1.5. Mixed Dentition
  - 7.1.6. Permanent Dentition
  - 7.1.7. Tooth Formation and Development
- 7.2. Typical and Pathological Normo Pattern
  - 7.2.1. Introduction
  - 7.2.2. Apparatus
  - 7.2.3. Dentolabial Deformities
  - 7.2.4. Eruptive Abnormalities
  - 7.2.5. Pathologic Patterns and Congenital Disorders
  - 7.2.6. Clinical Assessment and Examination
  - 7.2.7. Clinical Intervention
  - 7.2.8. Multidisciplinary Perspective
- 7.3. Clinical Examination and Radiographic Analysis
  - 7.3.1. Introduction
  - 7.3.2. Overview
  - 7.3.3. Teleradiography
  - 7.3.4. Ricketts' Circular Analysis
  - 7.3.5. Steiner's Cephalometric Analysis
  - 7.3.6. Bone Radiography
  - 7.3.7. Bibliography

- 7.4. Assessment
  - 7.4.1. Introduction
  - 7.4.2. Orofacial System Functions
  - 7.4.3. Aesthetic/Biofacial Analysis
  - 7.4.4. Anatomical-Functional Assessment
  - 7.4.5. Orofacial System Functions Assessment
  - 7.4.6. Atypical Swallowing
  - 7.4.7. Myofunctional Assessment Protocol
  - 7.4.8. Bibliography
- 7.5. Function and Form
  - 7.5.1. Introduction
  - 7.5.2. Breathing and Swallowing Disorders
  - 7.5.3. Breathing and Swallowing
  - 7.5.4. Bruxism
  - 7.5.5. Joint and Jaw Examination I
  - 7.5.6. Joint and Jaw Examination I
  - 7.5.7. Mandibular Dynamics Study
  - 7.5.8. Bibliography
- 7.6. Speech Therapy Intervention
  - 7.6.1. Introduction
  - 7.6.2. Mouth Breathing
  - 7.6.3. Oral Dysfunction
  - 7.6.4. Speech Therapy Intervention in Oral Breathing
  - 7.6.5. Atypical Swallowing
  - 7.6.6. Speech Therapy Intervention in Atypical Swallowing
  - 7.6.7. Temporomandibular Joint (TMJ)
  - 7.6.8. Speech Therapy Intervention in TMJ
  - 7.6.9. Bibliography
- 7.7. Occlusion and Malocclusion
  - 7.7.1. Introduction
  - 7.7.2. Temporal Occlusion
  - 7.7.3. Temporal Occlusion Development
  - 7.7.3. Permanent Occlusion
  - 7.7.4. Permanent Occlusion Development
  - 7.7.5. Physiological and Non-Physiological Occlusion
  - 7.7.6. Static and Dynamic Occlusion
  - 7.7.7. Multidisciplinary Treatment
  - 7.7.8. Bibliography
- 7.8. Main Occlusion Classification
  - 7.8.1. Introduction
  - 7.8.2. Features
  - 7.8.3. Anteroposterior Classification
  - 7.8.4. Transversal Syndrome I
  - 7.8.5. Transversal Syndrome II
  - 7.8.6. Vertical Syndromes
  - 7.8.7. Etiopathogenesis of Malocclusions
  - 7.8.8. Bibliography
- 7.9. Dentistry and Speech Therapy
  - 7.9.1. Introduction
  - 7.9.2. Multidisciplinary Work
  - 7.9.3. Extraoral Examination
  - 7.9.4. Intraoral Examination
  - 7.9.5. Functional Examination
  - 7.9.6. Dentistry and Oral Function
  - 7.9.7. Bibliography
  - 7.9.8. Speech Therapy Intervention in Orofacial Disorder
- 7.10. Case Studies
  - 7.10.1. Introduction
  - 7.10.2. Case Study 1
  - 7.10.3. Case Study 2
  - 7.10.4. Case Study 3
  - 7.10.5. Case Study 4
  - 7.10.6. Bibliography

**Module 8. Feeding in ASD (Autism Spectrum Disorder)**

- 8.1. Definition and History of ASD
  - 8.1.1. Breathing
  - 8.1.2. Respiratory Pattern and Classification
  - 8.1.3. Airway Analysis
  - 8.1.4. Chewing
  - 8.1.5. Swallowing
  - 8.1.6. Stomatognathic System Structures Involved in Swallowing
  - 8.1.7. Neurological Structures Involved in Swallowing
  - 8.1.8. Neurological Control of Swallowing
  - 8.1.9. Neurogenic Dysphagia
  - 8.1.10. Relation between Breathing and Swallowing: Importance of Breathing-Swallowing Coordination during Swallowing
- 8.2. Detection and Early Onset Diagnosis of Autism Spectrum Disorder
  - 8.2.1. Unit objectives
  - 8.2.2. Introduction
  - 8.2.3. Features of a TEA
  - 8.2.4. Social Communication and Interaction
  - 8.2.5. Communication Skills
  - 8.2.6. Social Interaction Skills
  - 8.2.7. Behavioral and Thinking Flexibility
  - 8.2.8. Sensory processing
  - 8.2.9. Scales and Instruments
  - 8.2.10. Conclusions
  - 8.2.11. Bibliographies
- 8.3. General Methodological Principles in the Treatment of Persons with ASD
  - 8.3.1. Introduction
  - 8.3.2. Basic Methodological Principles
  - 8.3.3. Intervention Techniques
  - 8.3.4. Intervention Support for People with ASD
  - 8.3.5. Teacch Working System
- 8.4. General Feeding Intervention Guidelines
  - 8.4.1. General Intervention Guidelines
  - 8.4.2. Order of Food Introduction
  - 8.4.3. Recommendations
  - 8.4.4. Conclusions
- 8.5. Dietary Problems in Children with ASD: Single Case Intervention Proposal. Part 1
  - 8.5.1. Introduction to Feeding Problems in Children with Autism
  - 8.5.2. Clinical Case Qualitative Assessment
  - 8.5.3. Example of Structural and Functional Orofacial Assessment
  - 8.5.4. Logopedic Intervention Strategies
- 8.6. Dietary Problems in Children with ASD: Single Case Intervention Proposal. Part 2
  - 8.6.1. Speech Therapy Intervention Program
  - 8.6.2. Enhance the Awareness and Control of Respiratory Functions
  - 8.6.3. Nasal Hygiene
  - 8.6.4. Promote Nasal Breathing and Blowing
  - 8.6.5. Enhancing Olfactory Sensory Response
  - 8.6.6. Dietary Function
  - 8.6.7. Oral Sensitivity
  - 8.6.8. Oral Hygiene
  - 8.6.9. Oral Stimulation
  - 8.6.10. Oral Motor Skills
  - 8.6.11. Oral Stereognosia
  - 8.6.12. Gag Reflex Inhibition
  - 8.6.13. Taste Stimulation
  - 8.6.14. Masticatory Muscle Relaxation
  - 8.6.15. Chewing without Food
  - 8.6.16. Chewing with Food

## Module 9. Feeding in Congenital Neurological Disorder

- 9.1. Feeding in Congenital Neurological Disorder Part 1
  - 9.1.1. Cerebral Palsy and Oropharyngeal Dysphagia
  - 9.1.2. Main Feeding-Related Problems Associated with Cerebral Palsy
  - 9.1.3. Alterations of Neuromuscular Function
  - 9.1.4. Sensory Alterations
  - 9.1.5. Structural Alterations Involved in the Swallowing Process
  - 9.1.6. Postural Alterations
  - 9.1.7. Orofacial Motor Disturbances
- 9.2. Feeding in Congenital Neurological Disorder Part 2
  - 9.2.1. Structural Alterations of the Oral Cavity
  - 9.2.2. Ogival Palate
  - 9.2.3. Malocclusions
  - 9.2.4. Temporomandibular Joint Disorders (TMJ)
  - 9.2.5. Oral Health Alterations
  - 9.2.6. Respiratory Problems
  - 9.2.7. No Cough Reflex or Ineffective Coughing
  - 9.2.8. Respiratory Infections Associated with Aspiration
  - 9.2.9. Bibliography
- 9.3. Alterations in Swallowing Safety and Efficacy. Main Signs Present in People with Cerebral Palsy
  - 9.3.1. Efficiency Alterations
  - 9.3.2. Security Alterations
  - 9.3.3. Evident Signs at the Time of Ingestion
  - 9.3.4. Not Evident Signs at the Time of Ingestion
  - 9.3.5. Action Model in the Presence of Swallowing Disturbances





- 9.4. Human Nutrition and Dietetics
  - 9.4.1. Symptomatology of Malnutrition and Dehydration
  - 9.4.2. Consequences of Malnutrition and Dehydration
  - 9.4.3. Diseases Caused by Heat
  - 9.4.4. Screening Scales for Malnutrition/Undernutrition
  - 9.4.5. Importance of the Role of the Nutritionist
- 9.5. Feeding in People with Cerebral Palsy and Related Disorders with High Support Needs with Dysphagia
  - 9.5.1. Importance of Interdisciplinary Work in the Feeding of the Person with CP with Dysphagia
  - 9.5.2. Types of Feeding in People with Cerebral Palsy and Disabilities with High Support Needs
  - 9.5.3. Aspects to Consider During Adapted Oral Feeding
  - 9.5.4. The Evolution Towards Texture and Consistency Adaptations of Foods
  - 9.5.5. Texturized Foods
  - 9.5.6. Main Differences Compared to Turmix Diets
  - 9.5.7. What Does the Implementation of Texturing Involve?

“*The syllabus of this degree is distinguished by its in-depth approach to the anatomy and function of the organs involved in functions such as respiration, phonation and swallowing*”

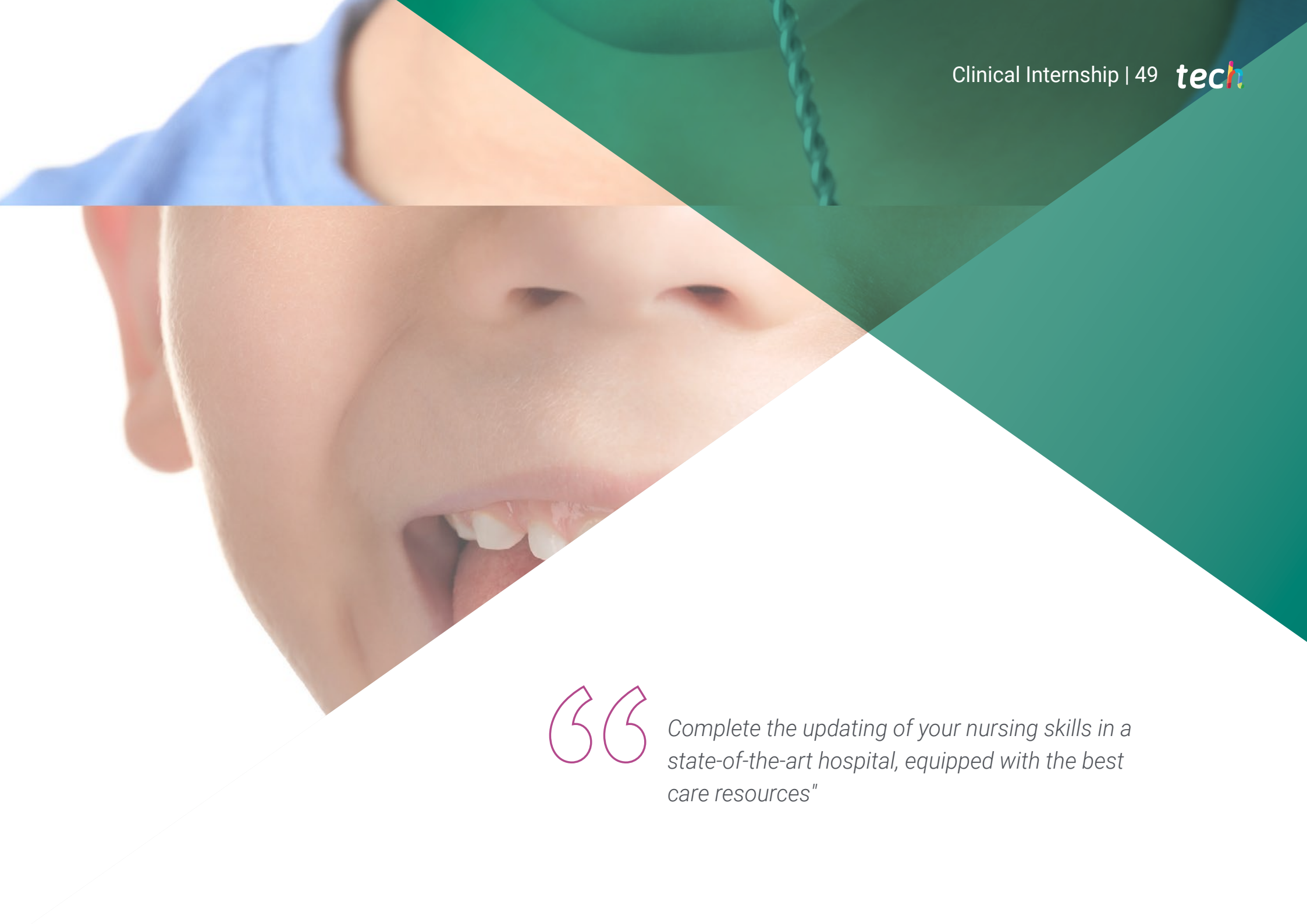
07

# Clinical Internship

After completing the initial theoretical phase of this degree, TECH offers the nurse a practical placement in a prestigious clinical facility. Therefore, this program will provide its graduates with a complete update, in a participative and dynamic manner, which makes it an excellent option to broaden their professional careers.







“

*Complete the updating of your nursing skills in a state-of-the-art hospital, equipped with the best care resources”*

This Hybrid Professional Master's Degree in Logopedic and Orofacial Neurorehabilitation for Nursing of TECH offers an intensive educational period of 120 didactic hours. During this time, participants will have the opportunity to work in different care dynamics within a demanding clinical facility, applying the procedures and techniques assimilated theoretically in real cases that need to overcome different conditions.

This stay, 100% face-to-face and immersive, consists of consecutive 8-hour days, from Monday to Friday, for 3 educational weeks. Within this period of time, nurses will work alongside the best experts in the field, gaining first-hand experience and practical skills in the treatment of speech and swallowing pathologies. In addition, they will have the support of an assistant tutor, who will be in charge of supervising academic progress and of inserting the student in the more complex tasks of the assistance unit.

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





The procedures described below will form the basis of the practical part of the training, and their implementation is subject to both the suitability of the patients and the availability of the center and its workload, with the proposed activities being as follows:

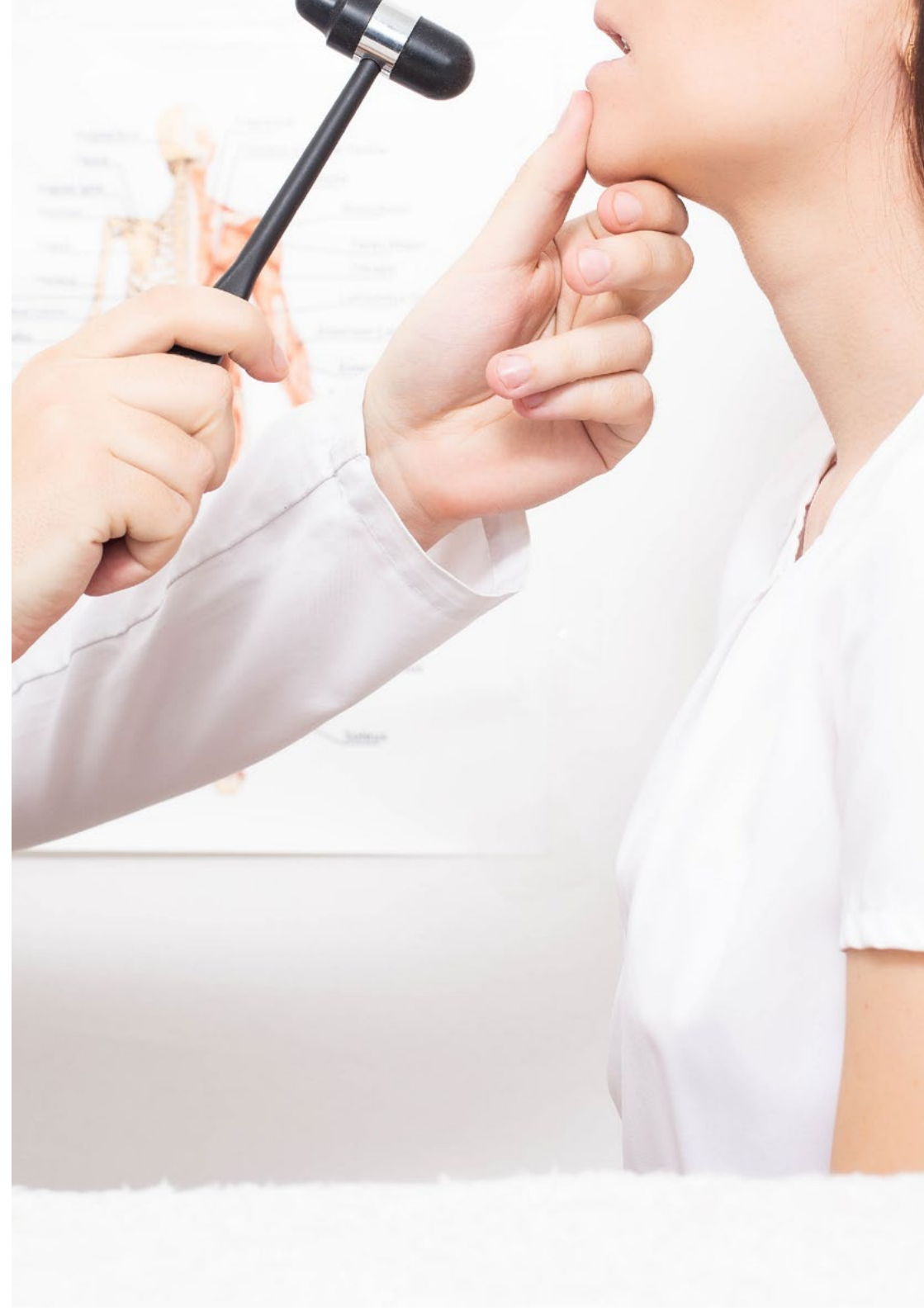
Module	Practical Activity
<b>Orofacial Therapy Nursing Strategies</b>	Apply in a practical way different evaluation techniques that are relevant to the Nursing professional in charge of orofacial disorders
	Participate, under expert supervision, in the performance of actual treatments for the rehabilitation of patients with orofacial disorders
	Personalized planning of each patient's treatment for orofacial disorders by a specialist physician
	Implement, from Nursing, techniques to improve orofacial muscle function in patients with swallowing and speech problems, such as muscle strengthening therapy and coordination therapy
	Improve speech articulation in patients with orofacial problems, applying methodologies recommended by practitioners such as articulation therapy and voice therapy
<b>New Technologies in Logopedic Neurorehabilitation for Nurses</b>	Use specialized speech therapy software that facilitates the application of pronunciation and writing exercises
	Offer remote therapy services through new communication technologies for patients who are unable to attend face-to-face sessions.
	Monitor patients taking specific medications for disorders such as Aphasia, identify possible adverse effects and notify the specialist physician.
<b>Feeding in Congenital Acquired Disorder</b>	Monitor the development of occupational and speech therapy in patients with feeding reluctance due to Autism Spectrum Disorders and ADHD
	Perform the nutritional support techniques that best suit patients with Cerebral Palsy, by means of techniques with Oral Modules and Enteral Nutrition, indicated by medical specialists
	Train family members and other helpers on the positioning of a person who requires assistance to consume food

## Civil Liability Insurance

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

For this purpose, this educational entity undertakes to take out civil liability insurance to cover any eventuality that may arise during the stay at the internship center.

This liability policy for interns will have broad coverage and will be taken out prior to the start of the practical training period. In this way, the professional will not have to worry in case they have to deal with an unexpected situation and will be covered until the end of the practical program at the center.



## General Conditions of Internship Program

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

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

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

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

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

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

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

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

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

# 08

## Where can I do the Clinical Internship?

This Hybrid Professional Master's Degree includes a clinical internship in state-of-the-art hospitals. Through them, nurses will have access to advanced assessment tools and techniques and will participate in high quality therapies, providing innovative and personalized follow-up to real patients. In addition, they will be accompanied by experienced and highly recognized professionals throughout the educational process.





“

*This TECH program offers you an internationally renowned hospital center for your clinical internship”*

# tech 56 | Where Can I Do the Clinical Internship?



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



Nursing

## Hospital HM Modelo

Country	City
Spain	La Coruña

Address: Rúa Virrey Osorio, 30, 15011, A Coruña

Network of private clinics, hospitals and specialized centers distributed throughout Spain

### Related internship programs:

- Anaesthesiology and Resuscitation
- Palliative Care



Nursing

## Hospital HM Regla

Country	City
Spain	León

Address: Calle Cardenal Landázuri, 2, 24003, León

Network of private clinics, hospitals and specialized centers distributed throughout Spain

### Related internship programs:

- Update on Psychiatric Treatment in Minor Patients







Nursing

### Hospital HM Torrelodones

Country	City
Spain	Madrid

Address: Av. Castillo Olivares, s/n, 28250  
Torrelodones, Madrid

Network of private clinics, hospitals and specialized centers distributed throughout Spain

**Related internship programs:**

- Anaesthesiology and Resuscitation
- Palliative Care

09

# Methodology

This academic program offers students 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 Nursing School we use the Case Method

In a given situation, what should a professional do? Throughout the program, students will face multiple simulated clinical cases, based on real patients, in which they will have to do research, establish hypotheses, and ultimately 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 course.



## Relearning Methodology

At TECH we enhance the case method with the best 100% online teaching methodology available: Relearning.

This 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 is a real revolution compared to the simple study and analysis of 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 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 175,000 nurses with unprecedented success in all specialities regardless of practical workload. Our pedagogical methodology is developed in a highly competitive environment, with a university student body with a strong socioeconomic profile and an average age of 43.5 years old.

*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 TECH's 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 specialists who teach the course, specifically for the course, so that the teaching content is really specific and precise.

These contents are then applied to the 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.



### Nursing Techniques and Procedures on Video

We introduce you to the latest techniques, to the latest educational advances, to the forefront of current medical techniques. All of this in direct contact with students and explained in detail so as to aid their 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 educational system for presenting multimedia content 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 their goals.



#### Classes

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



#### Quick Action Guides

TECH offers the most relevant contents of the course in the form of worksheets or quick action guides. A synthetic, practical, and effective way to help students progress in their learning.



# 10 Certificate

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



“

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

This **Hybrid Professional Master's Degree in Logopedic and Orofacial Neurorehabilitation for Nursing** contains the most complete and up-to-date program on the professional and educational field.

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

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

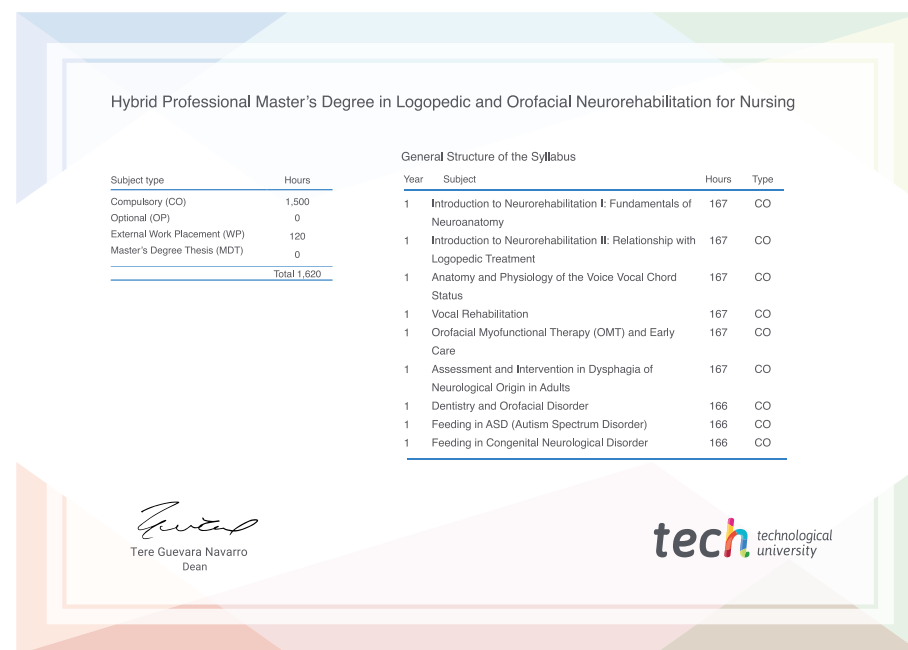
Title: **Hybrid Professional Master's Degree in Logopedic and Orofacial Neurorehabilitation for Nursing**

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

Duration: **12 months**

Certificate: **TECH Technological University**

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



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

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



## Hybrid Professional Master's Degree

Logopedic and Orofacial  
Neurorehabilitation  
for Nursing

Course Modality: Hybrid (Online + Clinical Internship)

Duration: 12 months

Certificate: TECH Technological University

Teaching Hours: 1,620 h.

# Hybrid Professional Master's Degree

Logopedic and Orofacial  
Neurorehabilitation  
for Nursing

