

Postgraduate Diploma

Hearing Diagnosis and Intervention





Postgraduate Diploma Hearing Diagnosis and Intervention

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

Website: www.techtute.com/us/medicine/postgraduate-diploma/postgraduate-diploma-hearing-diagnosis-intervention

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01

Introduction to the Program

According to the WHO, hearing loss is a global health problem that affects more than 1.5 billion people worldwide, of whom at least 430 million require hearing rehabilitation. This condition not only impacts the communication and quality of life of those who suffer from it, but is also associated with an increased risk of cognitive impairment, social isolation and emotional distress. With the increase in these cases, it is essential to have experts who can address this problem effectively. For this reason, TECH has developed this Postgraduate Diploma that will provide the most advanced knowledge to manage auditory assessment and treatment techniques. All this, based on a 100% online and innovative methodology.



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You will master the most advanced techniques in Hearing Diagnosis and Intervention with a 100% online program. You will study at your own pace with Relearning and become a specialist in an area with high professional demand”

Early detection and appropriate treatment of hearing disorders are essential to improve the quality of life of people with hearing difficulties. As hearing impairments affect a growing part of the population, health specialists require up-to-date knowledge of diagnostic and intervention techniques.

To respond to this need, TECH has designed this program in Hearing Diagnosis and Intervention that will delve into audiological evaluation, the most advanced therapeutic methods and the application of technology for auditory rehabilitation. Based on an optimized syllabus, professionals will cover everything from the anatomy and physiology of the auditory system to the handling of assistive devices such as hearing aids and cochlear implants. Likewise, they will emphasize diagnostic procedures such as tympanometry, otoacoustic emissions and auditory evoked potentials, essential for an accurate assessment.

By acquiring this knowledge, graduates will be prepared to work in hospitals, hearing clinics and rehabilitation centers, applying innovative techniques to improve the hearing and communication of their patients. In addition, they will be able to opt for positions in research or in the hearing device industry, consolidating a highly demanded professional profile. In this way, this program will not only expand job opportunities, but will also enable effective solutions to be provided in the healthcare field.

Finally, to guarantee a flexible and high-quality experience, TECH will offer a 100% online modality, adapted to the needs of working professionals. In turn, the implementation of the Relearning methodology, based on the reiteration of key concepts, will facilitate a progressive and effective assimilation of the content, optimizing study time. In this way, each expert will be able to progress at their own pace, accessing the materials at any time and from any electronic device connected to the Internet.

This **Postgraduate Diploma in Hearing Diagnosis and Intervention** contains the most complete and up-to-date program on the market. Its most notable features are:

- ♦ The development of practical cases presented by experts in Speech Therapy.
- ♦ The graphic, schematic, and practical contents with which they are created, provide scientific and practical information on the disciplines that are essential for professional practice
- ♦ Practical exercises where the self-assessment process can be carried out to improve learning
- ♦ Special emphasis on innovative methodologies in Hearing Diagnosis and Intervention
- ♦ 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



Total flexibility, unlimited access to content and an innovative methodology that will optimize your learning: that's what this complete program is all about. Make the most of this opportunity and enroll now!"

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With a clinical and practical approach, you will become a highly trained professional in auditory diagnosis. Thanks to this program, you will know how to identify and manage hearing disorders”

Its teaching staff includes professionals from the field of Speech Therapy, who bring their work experience to this program, as well as renowned specialists from leading societies and prestigious 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 learning experience designed to prepare for real-life situations.

This program is designed around Problem-Based Learning, whereby the student must try to solve the different professional practice situations that arise throughout the program. For this purpose, the professional will be assisted by an innovative interactive video system created by renowned and experienced experts.

With up-to-date content and analysis of real clinical cases, this program will provide you with the tools to improve the quality of life of your patients. Take the next step in your career with TECH!

Become a fully qualified professional and grow without limits! With TECH's 100% online methodology, you will learn about Hearing Diagnosis and Intervention without neglecting your professional or personal life!



02

Why Study at TECH?

TECH is the world's largest online university. With an impressive catalog of more than 14,000 university programs, available in 11 languages, it is positioned as a leader in employability, with a 99% job placement rate. In addition, it has a huge faculty of more than 6,000 professors of the highest international prestige.



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Study at the largest online university in the world and ensure your professional success. The future begins at TECH”

The world's best online university, according to FORBES

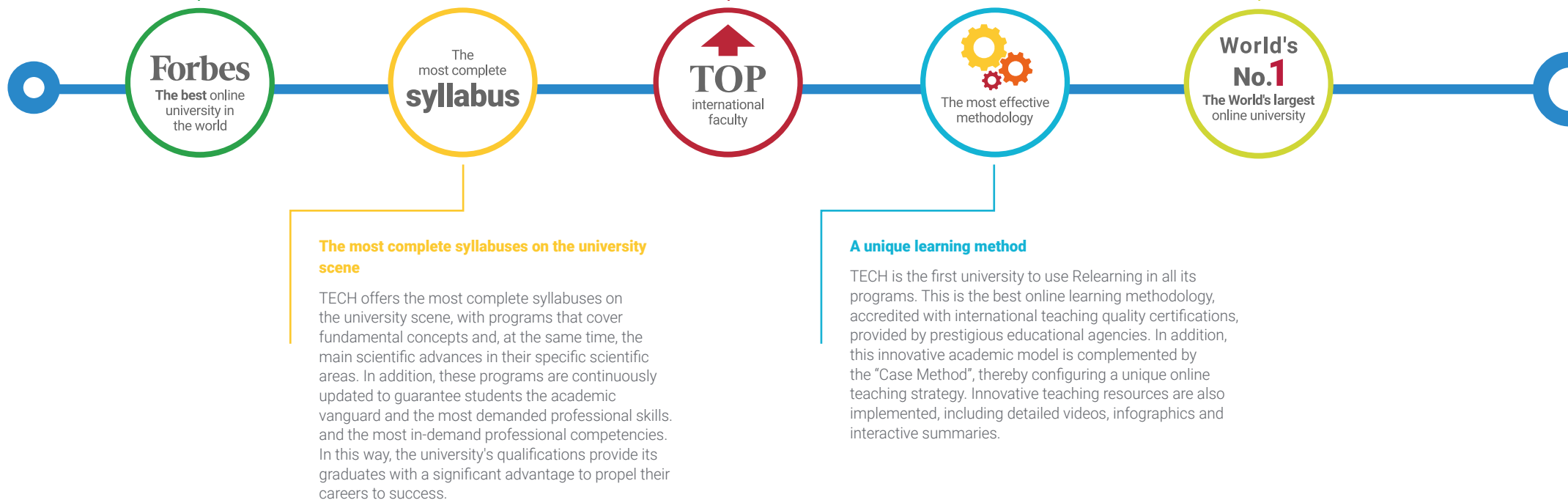
The prestigious Forbes magazine, specialized in business and finance, has highlighted TECH as "the best online university in the world" This is what they have recently stated in an article in their digital edition in which they echo the success story of this institution, "thanks to the academic offer it provides, the selection of its teaching staff, and an innovative learning method oriented to form the professionals of the future".

The best top international faculty

TECH's faculty is made up of more than 6,000 professors of the highest international prestige. Professors, researchers and top executives of multinational companies, including Isaiah Covington, performance coach of the Boston Celtics; Magda Romanska, principal investigator at Harvard MetaLAB; Ignacio Wistumba, chairman of the department of translational molecular pathology at MD Anderson Cancer Center; and D.W. Pine, creative director of TIME magazine, among others.

The world's largest online university

TECH is the world's largest online university. We are the largest educational institution, with the best and widest digital educational catalog, one hundred percent online and covering most areas of knowledge. We offer the largest selection of our own degrees and accredited online undergraduate and postgraduate degrees. In total, more than 14,000 university programs, in ten different languages, making us the largest educational institution in the world.



The official online university of the NBA

TECH is the official online university of the NBA. Thanks to our agreement with the biggest league in basketball, we offer our students exclusive university programs, as well as a wide variety of educational resources focused on the business of the league and other areas of the sports industry. Each program is made up of a uniquely designed syllabus and features exceptional guest hosts: professionals with a distinguished sports background who will offer their expertise on the most relevant topics.

Leaders in employability

TECH has become the leading university in employability. Ninety-nine percent of its students obtain jobs in the academic field they have studied within one year of completing any of the university's programs. A similar number achieve immediate career enhancement. All this thanks to a study methodology that bases its effectiveness on the acquisition of practical skills, which are absolutely necessary for professional development.



Google Premier Partner

The American technology giant has awarded TECH the Google Premier Partner badge. This award, which is only available to 3% of the world's companies, highlights the efficient, flexible and tailored experience that this university provides to students. The recognition not only accredits the maximum rigor, performance and investment in TECH's digital infrastructures, but also places this university as one of the world's leading technology companies.



The top-rated university by its students

Students have positioned TECH as the world's top-rated university on the main review websites, with a highest rating of 4.9 out of 5, obtained from more than 1,000 reviews. These results consolidate TECH as the benchmark university institution at an international level, reflecting the excellence and positive impact of its educational model.



03 Syllabus

TECH has designed a complete syllabus that will delve into Hearing Diagnosis and Intervention, combining a theoretical and clinical approach that responds to the needs of the healthcare sector. Throughout the program, professionals will address the fundamentals of the anatomy and physiology of the auditory system, as well as the most innovative procedures in audiological assessment. They will also delve into advanced strategies in auditory rehabilitation, including the use of hearing aids, cochlear implants and early intervention therapies. Graduates will know how to make evidence-based decisions and provide effective solutions to their patients.



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Boost your future in audiology with TECH and its innovative program! You will delve into audiological assessment and auditory rehabilitation strategies through a specialized program”

Module 1. Acoustic Physics and Audiology

- 1.1. Sound Wave: Properties and Characteristics
 - 1.1.1. Physical Characteristics of the Sound Wave
 - 1.1.1.1. Amplitude
 - 1.1.1.2. Frequency (F)
 - 1.1.1.3. Wave Length
 - 1.1.1.4. Speed
 - 1.1.2. Acoustic Characteristics of the Sound Wave
 - 1.1.2.1. Timbre
 - 1.1.2.2. Intensity
 - 1.1.2.3. Tone
 - 1.1.3. Behavior of the Sound Wave
 - 1.1.3.1. Propagation in Homogeneous Medium
 - 1.1.3.2. Effects of Interference and Superposition
- 1.2. Measurement of the Components of Sound Waves
 - 1.2.1. Measurement of Amplitude
 - 1.2.1.1. Decibels (dB)
 - 1.2.1.2. Logarithmic Scales
 - 1.2.2. Measurement of Frequency
 - 1.2.2.1. Hertz (Hz)
 - 1.2.2.2. Audible Range for the Human Ear
 - 1.2.3. Wavelength Measurement
 - 1.2.3.1. Relationship between Frequency, Speed of Sound and Wavelength
 - 1.2.3.2. Units of Measurement and their Application in Acoustics
- 1.3. Reflection, Refraction, Diffraction of Sound
 - 1.3.1. Reflection of Sound
 - 1.3.1.1. Law of Reflection
 - 1.3.1.2. Echoes and Reverberation
 - 1.3.2. Refraction of Sound
 - 1.3.2.1. Speed Changes in Different Medium
 - 1.3.2.2. Angle of Incidence and Refraction
 - 1.3.3. Diffraction of Sound
 - 1.3.3.1. Effects of Diffraction on Sound Barriers
 - 1.3.3.2. Diffraction in Open Spaces



- 1.4. Acoustic Physiology: The Human Ear and Hearing
 - 1.4.1. Ear Structure
 - 1.4.1.1. External Ear
 - 1.4.1.2. Middle Ear
 - 1.4.1.3. Inner Ear
 - 1.4.2. Hearing Process
 - 1.4.2.1. Sound Transduction
 - 1.4.2.2. Neural Coding of the Acoustic Signal
 - 1.4.3. Sound Perception
 - 1.4.3.1. Audible Frequencies
 - 1.4.3.2. Perception of Pitch and Volume
- 1.5. Subjective Tests: Acumetry and Pure Tone Audiometry
 - 1.5.1. Acumetry
 - 1.5.1.1. Basic Concepts
 - 1.5.1.2. Verbal and Noise Acumetry
 - 1.5.1.3. Tuning Fork Assessment Methods
 - 1.5.2. Pure Tone Audiometry
 - 1.5.2.1. Procedure
 - 1.5.2.2. Hearing Threshold
 - 1.5.2.3. Pure Tone Assessment
 - 1.5.3.4. Masking and Masking Dilemma
 - 1.5.3. Interpretation of Results
 - 1.5.3.1. Identification of Hearing Loss Patterns
 - 1.5.3.2. Differentiation between Conductive and Sensorineural Hearing Loss
 - 1.5.3.3. Clinical Application of Results in Diagnosis and Treatment
- 1.6. Subjective Tests: Supraliminal Audiometry and Verbal Audiometry
 - 1.6.1. Supraliminal Audiometry
 - 1.6.1.1. Fowler and SISI Tests
 - 1.6.1.2. Other Supraliminal Tests
 - 1.6.2. Verbal Audiometry or Speech Audiometry
 - 1.6.2.1. Other Suprathreshold Tests
 - 1.6.2.2. Procedure
 - 1.6.2.3. Masking in Verbal Audiometry
- 1.6.3. Interpretation of Results
 - 1.6.3.1. Speech Intelligibility Analysis
 - 1.6.3.2. Relationship between Verbal Results and Types of Hearing Loss
 - 1.6.3.3. Application of the Results in Auditory Rehabilitation
- 1.7. Subjective Tests: Free-field Audiometry and Pediatric Audiometry
 - 1.7.1. Free-field Audiometry
 - 1.7.1.1. Free-field Assessment Procedures
 - 1.7.1.2. Clinical Trials Masking
 - 1.7.2. Pediatric Audiometry
 - 1.7.2.1. General Considerations
 - 1.7.2.2. Unconditioned Pediatric Audiometry
 - 1.7.2.3. Conditioned Pediatric Audiometry
 - 1.7.3. Interpretation of Results
 - 1.7.3.1. Analysis of Response Patterns in Free Field
 - 1.7.3.2. Relationship between Results and Environmental Conditions
 - 1.7.3.3. Application of Results in Hearing Interventions
- 1.8. Objective Tests: Impedance Spectroscopy
 - 1.8.1. Fundamentals of Impedance Spectroscopy
 - 1.8.1.1. Resistance and Reactance of the Middle Ear
 - 1.8.1.2. Tympanometric Curve
 - 1.8.2. Acoustic Reflex Test
 - 1.8.2.1. Stapedius Muscle Contraction
 - 1.8.2.2. Measurement of Stapedius Muscle Contraction
 - 1.8.3. Clinical Interpretation of Impedance Spectroscopy
 - 1.8.3.1. Diagnosis of Middle Ear Dysfunction
 - 1.8.3.2. Relationship between Tympanometric Curves and Types of Hearing Loss
 - 1.8.3.3. Use of Impedance Spectroscopy Measurement in Monitoring Hearing
- 1.9. Objective Tests: Otoacoustic Emissions and Auditory Evoked Potentials
 - 1.9.1. Otoacoustic Emissions
 - 1.9.1.1. Principles of Otoacoustic Emissions
 - 1.9.1.2. Clinical Indications

- 1.9.2. Auditory Evoked Potentials
 - 1.9.2.1. Brainstem Auditory Evoked Potentials (BAEP)
 - 1.9.2.2. Applications in the Assessment of the Central Auditory System
- 1.9.3. Interpretation of Objective Tests
 - 1.9.3.1. Relationship between Otoacoustic Emissions and the State of Cochlear Function
 - 1.9.3.2. Identification of Auditory Disorder Using Evoked Potentials
 - 1.9.3.3. Use of Objective Tests in Differential Diagnoses
- 1.10. Assessment Booths
 - 1.10.1. Preliminary Considerations
 - 1.10.1.1. International Regulations and Standards
 - 1.10.1.2. Environmental Factors and Noise Control
 - 1.10.2. Anechoic Chambers
 - 1.10.2.1. Design and Acoustic Characteristics
 - 1.10.2.2. Applications in Hearing Tests and Experiments
 - 1.10.3. Semi-Anechoic Chamber
 - 1.10.3.1. Comparison with Anechoic Chambers
 - 1.10.3.2. Use in Simulation of Real Acoustic Environments
 - 1.10.4. Audiometric or Sound-Attenuated Chambers
 - 1.10.4.1. Technology and Equipment Used in Audiometry
 - 1.10.4.2. External Noise Control and Patient Comfort
 - 1.10.5. Reverberation Chambers
 - 1.10.5.1. Characteristics of Sound in Reverberant Environments
 - 1.10.5.2. Applications in Sound Absorption and Acoustic Quality Tests

Module 2. Speech Therapy Intervention for Hearing Impairments

- 2.1. Diagnosis and Etiology of Hearing Loss
 - 2.1.1. Epidemiology of Hearing Loss
 - 2.1.1.1. Hearing Loss in Newborns
 - 2.1.1.2. Hearing Loss in Children
 - 2.1.1.3. Hearing Loss in Adults
 - 2.1.2. Early Detection of Hearing Loss
 - 2.1.2.1. Methods of Newborn Screening
 - 2.1.2.2. Screening Tests in Childhood
- 2.2. Risk Factors and Prevention of Hearing Loss
 - 2.2.1. Risk Indicators for Hearing Loss
 - 2.2.1.1. Genetic Factors
 - 2.2.1.2. Exposure to Loud Noises
 - 2.2.1.3. Diseases and Medical Conditions
 - 2.2.2. Classification of Hearing Loss
 - 2.2.2.1. Conductive Hearing Loss
 - 2.2.2.2. Sensorineural Hearing Loss
 - 2.2.2.3. Mixed Hearing Loss
 - 2.2.3. Consequences of Child Hearing Loss
 - 2.2.3.1. Impact on Language Development
 - 2.2.3.2. Impact on Emotional and Social Development
 - 2.2.3.3. Impact on Performance School
- 2.3. Conventional Hearing Aids
 - 2.3.1. History of the Hearing Aid
 - 2.3.1.1. First Hearing Aids
 - 2.3.1.2. Technological Evolution of Hearing Aids
 - 2.3.2. Components and Operation
 - 2.3.2.1. Microphone
 - 2.3.2.2. Amplifier
 - 2.3.2.3. Receiver and Internal Hearing Aid
 - 2.3.3. Types of Hearing Aids
 - 2.3.3.1. Behind-the-Ear Hearing Aids
 - 2.3.3.2. In-the-Canal Hearing Aids
 - 2.3.3.3. Full-Ear Hearing Aids
- 2.4. Bone Conduction Implants and Middle Ear Implants
 - 2.4.1. Basic Concepts
 - 2.4.1.1. Bone Conduction Principle
 - 2.4.1.2. Indications for Bone Conduction Implants

- 2.1.3. Etiology of Hearing Loss
 - 2.1.3.1. Genetic Causes
 - 2.1.3.2. Acquired Causes
 - 2.1.3.3. Prenatal and Perinatal Hearing Loss

- 2.4.2. Types of Implants and Indications
 - 2.4.2.1. Bone Conduction Implants
 - 2.4.2.2. Middle Ear Implants
- 2.4.3. Surgery Osseointegrated Implant
 - 2.4.3.1. Surgical Procedure
 - 2.4.3.2. Risks and Benefits
- 2.5. Cochlear implants
 - 2.5.1. Cochlear Implant Components and Functioning
 - 2.5.1.1. External Parts of the Cochlear Implant
 - 2.5.1.2. Internal Parts of the Cochlear Implant
 - 2.5.2. CI Indications
 - 2.5.2.1. Indications for Adults
 - 2.5.2.2. Indications for Children
 - 2.5.3. Structure of a CI Program
 - 2.5.3.1. Pre-implant Assessment
 - 2.5.3.2. Post-operative and Follow-up
 - 2.5.4. CI Surgery
 - 2.5.4.1. Surgical Procedure
 - 2.5.4.2. Possible Complications and Their Management
 - 2.5.4.3. Telemetry
- 2.6. Assessment of Prosthetic Performance
 - 2.6.1. Technical Requirements
 - 2.6.1.1. Technical Parameters for Assessment
 - 2.6.1.2. Tools for Measuring Prosthetic Effectiveness
 - 2.6.2. Battery of Tonal Tests
 - 2.6.2.1. Auditory Threshold Test
 - 2.6.2.2. Tone Discrimination Test
 - 2.6.3. Battery of Verbal Tests
 - 2.6.3.1. Words Recognition Test
 - 2.6.3.2. Verbal Comprehension Test
- 2.7. Communication Methods and Systems
 - 2.7.1. Oral Methods
 - 2.7.1.1. Speech Method
 - 2.7.1.2. Auditory Stimulation Methods
 - 2.7.2. Gestural Methods
 - 2.7.2.1. Sign Language
 - 2.7.2.2. Gestures and Mime
 - 2.7.3. Mixed Methods
 - 2.7.3.1. Integration of Sign Language and Oral Communication
 - 2.7.3.2. Benefits of Mixed Methods
- 2.8. Advice for the Family of the Hearing-Impaired Child
 - 2.8.1. Impact on the Family
 - 2.8.1.1. Psychological Adaptation of Parents
 - 2.8.1.2. Family Dynamics in Response to Hearing Loss
 - 2.8.2. Guidance for Relatives of Children Aged 0–6
 - 2.8.2.1. Early Stimulation Strategies
 - 2.8.2.2. Support on Language Development
 - 2.8.3. Guidance for Relatives of Children Aged 6–12
 - 2.8.3.1. Support in School Integration
 - 2.8.3.2. Strategies for Socialization
 - 2.8.4. Development of School, Social and Emotional Competence
 - 2.8.4.1. Setting Educational Goals
 - 2.8.4.2. Support in Emotional Development
- 2.9. Technical Aids and Schooling for the Hearing Impaired Child
 - 2.9.1. Frequency Modulation Systems
 - 2.9.1.1. Use in the Classroom
 - 2.9.1.2. Adaptation and Benefits
 - 2.9.2. Magnetic Loops and Connectivity
 - 2.9.2.1. Principle of Operation
 - 2.9.2.2. Integration with Other Devices
 - 2.9.3. School Acoustics
 - 2.9.3.1. Optimization of the Acoustic Environment in the Classroom
 - 2.9.3.2. Measures to Reduce Environmental Noise
 - 2.9.4. Visual Resources
 - 2.9.4.1. Use of Subtitles and Visual Screens
 - 2.9.4.2. Integration of Visual Technologies in the Classroom

- 2.10. Auditory Rehabilitation of the Post-Lingual Deaf with a Cochlear Implant
 - 2.10.1. Detection
 - 2.10.1.1. Initial Hearing Assessment
 - 2.10.1.2. Early Identification of Difficulties
 - 2.10.2. Discrimination
 - 2.10.2.1. Tone Discrimination Training
 - 2.10.2.2. Speech Discrimination Training
 - 2.10.3. Identification
 - 2.10.3.1. Recognition of Environmental Sounds
 - 2.10.3.2. Identification of Speech Sounds
 - 2.10.4. Detection
 - 2.10.4.1. Detection of Isolated Words
 - 2.10.4.2. Detection of Complete Sentences
 - 2.10.5. Comprehension
 - 2.10.5.1. Comprehension of Discourse in Context
 - 2.10.5.2. Strategies to Improve Auditory Comprehension

Module 3. Technological Resources in Speech Therapy

- 3.1. Use of Digital Technologies in Speech Therapy Intervention
 - 3.1.1. Digital Tools in Speech and Language Assessment
 - 3.1.1.1. Voice Analysis Applications for Diagnosis
 - 3.1.2. Applications for Speech Rehabilitation
 - 3.1.2.1. Interactive Games for Speech Improvement
 - 3.1.3. Use of Simulators and Interactive Games in Speech Therapy
 - 3.1.3.1. Voice Simulators for Therapy
 - 3.1.4. Telemedicine Platforms for Speech Therapy
 - 3.1.4.1. Videoconferencing Platforms for Therapy Sessions
- 3.2. Technological Tools for Assessment and Diagnosis in Speech Therapy
 - 3.2.1. Voice and Pronunciation Analysis Software
 - 3.2.1.1. Acoustic Analysis Tools
 - 3.2.2. Tools for the Assessment of Verbal Comprehension and Expression
 - 3.2.2.1. Software for the Assessment of Verbal Fluency
- 3.2.3. Digital Techniques for the Diagnosis of Speech Disorders
 - 3.2.3.1. Digital Assessment of Dysarthria
- 3.2.4. Technological Equipment for the Assessment of Hearing and Language Perception
 - 3.2.4.1. Digital Tests for Hearing Assessment
- 3.3. Mobile Apps for Learning Alternative and Augmentative Communication Systems
 - 3.3.1. Apps for Training in the Use of Pictograms
 - 3.3.1.1. Programs for Learning Visual Pictograms
 - 3.3.2. Tools for Monitoring Patients in the Use of Alternative Systems
 - 3.3.2.1. Daily Use Monitoring Apps
 - 3.3.3. Apps for Improving Communication in Children and Adults with Disorders
 - 3.3.3.1. Personalized Applications for Children with Autism
 - 3.3.4. Personalized Programs for Learning Signs and Symbols
 - 3.3.4.1. Apps for Teaching Sign Language
- 3.4. Virtual Platforms for Speech Therapy Rehabilitation
 - 3.4.1. Interactive Platforms for Remote Language Therapy
 - 3.4.1.1. Platforms with Interactive Exercises in Real Time
 - 3.4.2. Use of Videoconferencing in Speech Therapy Rehabilitation
 - 3.4.2.1. Benefits of Teletherapy for Remote Patients
 - 3.4.3. Online Programs for Monitoring Patient Progress
 - 3.4.3.1. Progress Monitoring Software
 - 3.4.4. Real-Time Feedback Tools for Therapists and Patients
 - 3.4.4.1. Real-Time Vocal Feedback Applications
- 3.5. Assistive Technologies for Improving Communication in Patients with Disabilities
 - 3.5.1. Computer-generated Voice Devices
 - 3.5.1.1. Voice Technologies for People with Aphasia
 - 3.5.2. Reading and Writing Technologies for Visually Impaired People
 - 3.5.2.1. Reading Software for Blind People
 - 3.5.3. Hearing Aids and Sound Amplification Systems
 - 3.5.3.1. Amplification Devices for Patients with Hearing Loss
 - 3.5.4. Assistive Technologies for People with Cerebral Palsy
 - 3.5.4.1. Communication Devices for People with Limited Mobility

- 3.6. Design and Use of Electronic Devices for Communication Prostheses
 - 3.6.1. Electronic Devices for Patients with Aphasia
 - 3.6.1.1. Augmentative Communication Devices for Aphasia
 - 3.6.2. Vocal Prostheses and their Integration into Daily Communication
 - 3.6.2.1. Prosthetic Devices for the Improvement of Speech and Voice
 - 3.6.3. Portable Technologies to Improve Communication in People with Paralysis
 - 3.6.3.1. Portable Prostheses for Patients with Paralysis
 - 3.6.4. Devices for the Improvement of Speech in Patients with Dysarthria
 - 3.6.4.1. Support Devices for Vocal Articulation
- 3.7. Devices for Improving Speech in Patients with Dysarthria
 - 3.7.1. Impact of Technology on the Efficiency of Speech Therapy
 - 3.7.1.1. Improvements in the Quality of Treatments with Technology
 - 3.7.2. Tools for Data Collection and Analysis of Patient Progress
 - 3.7.2.1. Clinical Data Analysis Software
 - 3.7.3. Recording Technologies for Monitoring Speech Therapy Intervention
 - 3.7.3.1. Platforms for Recording Therapy Sessions
 - 3.7.4. Use of Social Networks and Virtual Communities for Collaborative Learning
 - 3.7.4.1. Social Network Support Groups for Patients
 - 3.7.4.2. Professional Development Groups
- 3.8. Specialized Software for Speech Therapy Assessment
 - 3.8.1. Computer Programs for the Early Detection of Language Disorders
 - 3.8.1.1. Screening Software
 - 3.8.2. Digital Tools for Assessing Pronunciation and Verbal Fluency
 - 3.8.2.1. Speech Analysis Tools
 - 3.8.3. Software for Assessment of Reading Comprehension and Written Expression
 - 3.8.3.1. Programs for the Assessment of Reading Comprehension
 - 3.8.3.2. Text Assessment Programs
 - 3.8.4. Voice Analysis Platforms for Speech Therapy Diagnoses
 - 3.8.4.1. Applications for the Analysis of Vocal Parameters
- 3.9. Integration of Technological Resources in Personalized Speech Therapy Treatments
 - 3.9.1. Adaptation of Applications and Devices to Individual Needs
 - 3.9.1.1. Customization of Applications According to Specific Disorders
 - 3.9.2. Use of Artificial Intelligence in the Customization of Treatments
 - 3.9.2.1. Intelligent Systems for Adapting Speech Therapy
 - 3.9.3. Design of Specific Digital Programs According to Speech Therapy Disorder
 - 3.9.4. Personalization of Intervention Through the Analysis of Patient Data
 - 3.9.4.1. Use of Clinical Data to Personalize Therapy
- 3.10. Strategies to Integrate Accessible Technologies into the Daily Lives of Patients with Communication Needs
 - 3.10.1. Use of Technologies to Improve Communication at Home
 - 3.10.1.1. Devices for Family Communication
 - 3.10.2. Integration of Devices at School or Work for Patients with Communication Difficulties
 - 3.10.2.1. Assistive Technologies in Educational Settings
 - 3.10.3. Adaptation of Technologies to Facilitate Social Inclusion
 - 3.10.3.1. Tools for the Social Integration of People with Disabilities
 - 3.10.4. Training Programs for Family Members and Caregivers in the Use of Accessible Technologies
 - 3.10.4.1. Training Workshops for the Use of Assistive Devices



Your future in Hearing Diagnosis and Intervention starts at TECH. You will learn from the best teachers and a methodology based on Relearning that guarantees practical and effective results”

04

Teaching Objectives

This program has been designed with an innovative approach that will guarantee the acquisition of advanced skills in hearing assessment, diagnosis and rehabilitation. In this way, the program will provide a deep understanding of the anatomy and physiology of the auditory system, and the disorders that can affect its functioning. Based on this knowledge, graduates will master the application of advanced audiological assessment techniques, including subjective and objective hearing tests, in order to establish accurate diagnoses and develop appropriate treatment plans for each case.



“

TECH will guarantee you excellent preparation that will enable you to face the challenges of Hearing Diagnosis and Intervention with confidence and efficiency”



General Objectives

- Analyze auditory processes and their relationship with communication
- Diagnose auditory alterations through specialized tests
- Apply intervention techniques to improve hearing ability
- Identify risk factors associated with hearing loss
- Design hearing rehabilitation plans adapted to each patient
- Implement prevention strategies for auditory disorders
- Integrate the use of advanced technologies in audiological diagnosis
- Assess the effectiveness of hearing treatments in different populations
- Advise patients and families on the management of hearing loss
- Research new methodologies for hearing diagnosis and intervention



Transform your clinical approach to treating hearing problems! You will learn 100% online with a program that adapts to your needs. What are you waiting for to enroll?"





Specific Objectives

Module 1. Acoustic Physics and Audiology

- ♦ Understand the fundamental properties and characteristics of sound waves
- ♦ Apply methods for measuring sound waves and their components
- ♦ Analyze the acoustic processes of reflection, refraction and diffraction in the propagation of sound
- ♦ Identify methods for assessing auditory function using subjective and objective tests

Module 2. Speech Therapy Intervention for Hearing Impairments

- ♦ Identify alterations in auditory perception and their impact on communication and social, school and family integration
- ♦ Assess the therapeutic options available for auditory rehabilitation, differentiating the approaches according to the type of hearing loss
- ♦ Know and apply audio-prosthetic devices appropriate for each degree of hearing loss
- ♦ Understand the fundamentals of cochlear implants and select the appropriate candidates for this device

Module 3. Technological Resources in Speech Therapy

- ♦ Apply speech therapy treatments appropriate to the individual needs of patients
- ♦ Select and adapt alternative and augmentative communication systems according to the context of each patient
- ♦ Facilitate the learning of alternative systems and increase the use of prostheses and technical aids
- ♦ Know and apply assessment and diagnostic techniques and instruments in Speech Therapy

05 Study Methodology

TECH is the world's first university to combine the **case study** methodology with **Relearning**, a 100% online learning system based on guided repetition.

This disruptive pedagogical strategy has been conceived to offer professionals the opportunity to update their knowledge and develop their skills in an intensive and rigorous way. A learning model that places students at the center of the educational process giving them the leading role, adapting to their needs and leaving aside more conventional methodologies.



“

TECH will prepare you to face new challenges in uncertain environments and achieve success in your career”

The student: the priority of all TECH programs

In TECH's study methodology, the student is the main protagonist.

The teaching tools of each program have been selected taking into account the demands of time, availability and academic rigor that, today, not only students demand but also the most competitive positions in the market.

With TECH's asynchronous educational model, it is students who choose the time they dedicate to study, how they decide to establish their routines, and all this from the comfort of the electronic device of their choice. The student will not have to participate in live classes, which in many cases they will not be able to attend. The learning activities will be done when it is convenient for them. They can always decide when and from where they want to study.

“

*At TECH you will NOT have live classes
(which you might not be able to attend)”*



The most comprehensive study plans at the international level

TECH is distinguished by offering the most complete academic itineraries on the university scene. This comprehensiveness is achieved through the creation of syllabi that not only cover the essential knowledge, but also the most recent innovations in each area.

By being constantly up to date, these programs allow students to keep up with market changes and acquire the skills most valued by employers. In this way, those who complete their studies at TECH receive a comprehensive education that provides them with a notable competitive advantage to further their careers.

And what's more, they will be able to do so from any device, pc, tablet or smartphone.

“*TECH's model is asynchronous, so it allows you to study with your pc, tablet or your smartphone wherever you want, whenever you want and for as long as you want*”

Case Studies and Case Method

The case method has been the learning system most used by the world's best business schools. Developed in 1912 so that law students would not only learn the law based on theoretical content, its function was also to present them with real complex situations. In this way, they could make informed decisions and value judgments about how to resolve them. In 1924, Harvard adopted it as a standard teaching method.

With this teaching model, it is students themselves who build their professional competence through strategies such as Learning by Doing or Design Thinking, used by other renowned institutions such as Yale or Stanford.

This action-oriented method will be applied throughout the entire academic itinerary that the student undertakes with TECH. Students will be confronted with multiple real-life situations and will have to integrate knowledge, research, discuss and defend their ideas and decisions. All this with the premise of answering the question of how they would act when facing specific events of complexity in their daily work.



Relearning Methodology

At TECH, case studies are enhanced with the best 100% online teaching method: Relearning.

This method breaks with traditional teaching techniques to put the student at the center of the equation, providing the best content in different formats. In this way, it manages to review and reiterate the key concepts of each subject and learn to apply them in a real context.

In the same line, and according to multiple scientific researches, reiteration is the best way to learn. For this reason, TECH offers between 8 and 16 repetitions of each key concept within the same lesson, presented in a different way, with the objective of ensuring that the knowledge is completely consolidated during the study process.

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.



A 100% online Virtual Campus with the best teaching resources

In order to apply its methodology effectively, TECH focuses on providing graduates with teaching materials in different formats: texts, interactive videos, illustrations and knowledge maps, among others. All of them are designed by qualified teachers who focus their work on combining real cases with the resolution of complex situations through simulation, the study of contexts applied to each professional career and learning based on repetition, through audios, presentations, animations, images, etc.

The latest scientific evidence in the field of Neuroscience points to the importance of taking into account the place and context where the content is accessed before starting a new learning process. Being able to adjust these variables in a personalized way helps people to remember and store knowledge in the hippocampus to retain it in the long term. This is a model called Neurocognitive context-dependent e-learning that is consciously applied in this university qualification.

In order to facilitate tutor-student contact as much as possible, you will have a wide range of communication possibilities, both in real time and delayed (internal messaging, telephone answering service, email contact with the technical secretary, chat and videoconferences).

Likewise, this very complete Virtual Campus will allow TECH students to organize their study schedules according to their personal availability or work obligations. In this way, they will have global control of the academic content and teaching tools, based on their fast-paced professional update.



The online study mode of this program will allow you to organize your time and learning pace, adapting it to your schedule”

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

1. Students who follow this method not only achieve the assimilation of concepts, but also a development of their mental capacity, through exercises that assess real situations and the application of knowledge.
2. Learning is solidly translated into practical skills that allow the student to better integrate into the real world.
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.

The university methodology top-rated by its students

The results of this innovative teaching model can be seen in the overall satisfaction levels of TECH graduates.

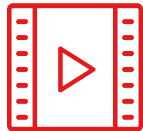
The students' assessment of the teaching quality, the quality of the materials, the structure of the program and its objectives is excellent. Not surprisingly, the institution became the top-rated university by its students according to the global score index, obtaining a 4.9 out of 5.

Access the study contents from any device with an Internet connection (computer, tablet, smartphone) thanks to the fact that TECH is at the forefront of technology and teaching.

You will be able to learn with the advantages that come with having access to simulated learning environments and the learning by observation approach, that is, Learning from an expert.



As such, the best educational materials, thoroughly prepared, will be available in this program:



Study Material

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

This content is then adapted in an audiovisual format that will create our way of working online, with the latest techniques that allow us to offer you high quality in all of the material that we provide you with.



Practicing Skills and Abilities

You will carry out activities to develop specific competencies and skills in each thematic field. Exercises and activities to acquire and develop the skills and abilities that a specialist needs to develop within the framework of the globalization we live in.



Interactive Summaries

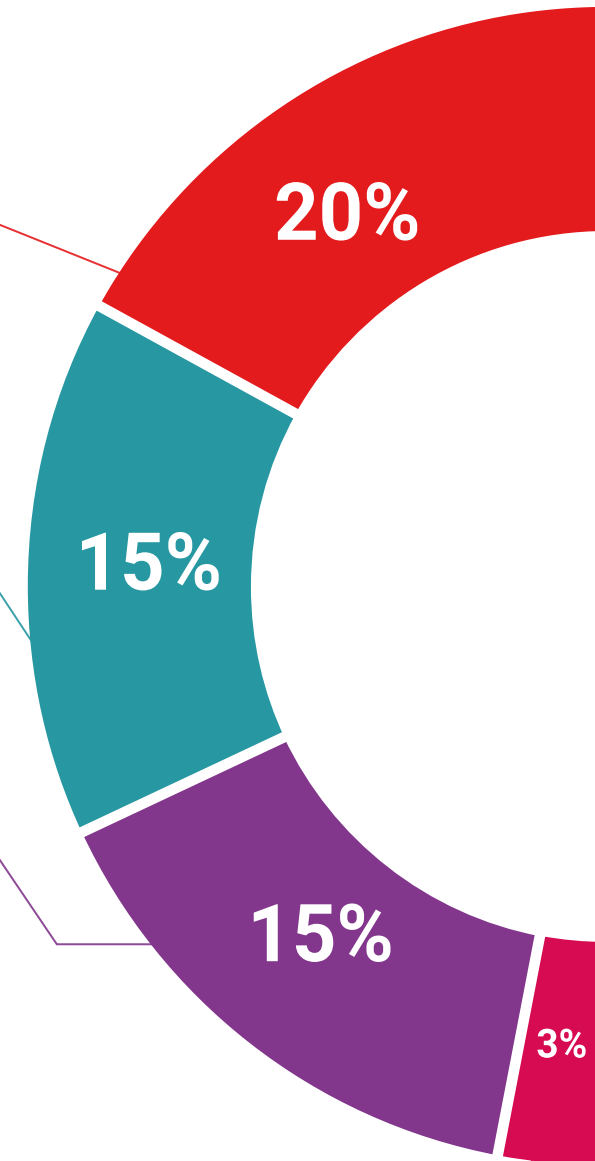
We present the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

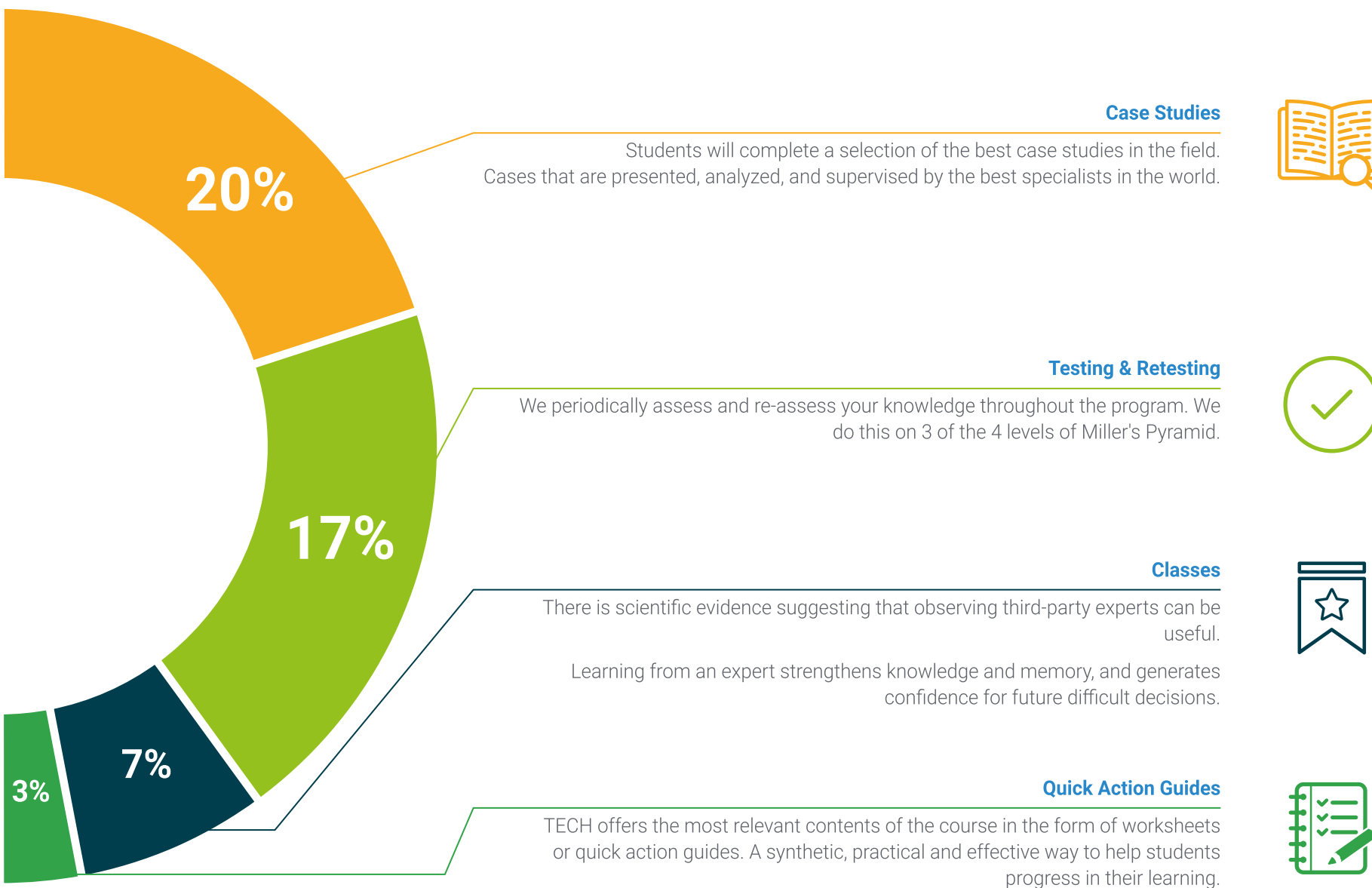
This exclusive educational system for presenting multimedia content was awarded by Microsoft as a "European Success Story".



Additional Reading

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





06 Certificate

This Postgraduate Diploma in Hearing Diagnosis and Intervention guarantees students, in addition to the most rigorous and up-to-date education, access to a diploma for the Postgraduate Diploma issued by TECH Global University.



“

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

This private qualification will allow you to obtain a diploma for the **Postgraduate Diploma in Hearing Diagnosis and Intervention** 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 Hearing Diagnosis and Intervention**

Modality: **online**

Duration: **6 months**

Accreditation: **18 ECTS**





Postgraduate Diploma Hearing Diagnosis and Intervention

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

Postgraduate Diploma

Hearing Diagnosis and Intervention

