Postgraduate Diploma
Acoustic Measurement

tech global university

tech global university

Postgraduate Diploma
Acoustic Measurement

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

Website: www.techtitute.com/us/engineering/postgraduate-diploma/postgraduate-diploma-acoustic-measurement

Index

01

Introduction

In many urban areas, buildings do not meet fundamental noise insulation requirements. This has a negative impact on the quality of life of residents, as they are exposed to unwanted noise levels, many of them suffering from stress, sleep disorders and other health problems. The development of acoustic impact tests is essential to be able to curb these harmful consequences by the hand of the most qualified and updated professionals. For this reason, TECH has designed a program where students will update their skills and analyze the most modern sound control, limitation and measurement tools. All this 100% online, through the innovative and exclusive Relearning methodology.

Get advanced and rigorous skills for the measurement of sound impact through this 100% online Postgraduate Diploma"

The World Health Organization (WHO) estimates that millions of people suffer from hearing loss due to exposure to excessive noise. This condition is latent especially in workers in productive areas such as construction, industry and transportation. The alarms generated by these annoyances have caused more and more companies to pay attention to the hearing health of their employees, developing exhaustive studies of noise impact. At the same time, implementing these measurements requires meticulous planning and execution where the most advanced technological instruments in the sector are integrally inserted.

TECH Global University has brought together the main innovations in this field in this Postgraduate Diploma. Therefore, acoustic engineers will be able to update their theoretical knowledge and practical skills about spectral analysis, frequency bands, among other aspects. At the same time, the syllabus will describe the latest tools for noise measurement, among which digital sound level meters of the highest precision and dosimeters stand out. Intensimetry and acoustic excitation sources will also be addressed in this academic itinerary.

On the other hand, the program will dedicate one of its modules to mastering the mechanisms for evaluating sound insulation in buildings and other constructions. At the same time, it will go into the necessary tests to determine reverberation, measure the transmission of the spoken word (STI) and the transmission of interior noise to the exterior. All this, through numerous teaching materials that will bring dynamism to this learning process of 450 teaching hours.

Likewise, the contents of the program have been chosen by a faculty of excellence, composed of acoustic engineers with extensive experience and prestigious results throughout their professional work. These materials are integrated in a disruptive way in a 100% online study platform that is not subject to rigid timetables or evaluation schedules. On the contrary, each graduate will be able to complete their training at any time or place, 24 hours a day, 7 days a week.

This **Postgraduate Diploma in Acoustic Measurement** contains the most complete and up-to-date program on the market. The most important features include:

- Development of case studies presented by experts in Acoustics engineering
- The graphic, schematic and practical contents of the program provide technical and practical information on those disciplines that are essential for professional practice
- The practical exercises where the self-evaluation process can be carried out to improve learning
- Its special emphasis on innovative methodologies
- 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

A complete academic itinerary that you can only access through TECH, the largest online university in the world"

You will have at your disposal 450 hours of exclusive teaching materials on the most innovative platform in the online academic panorama"

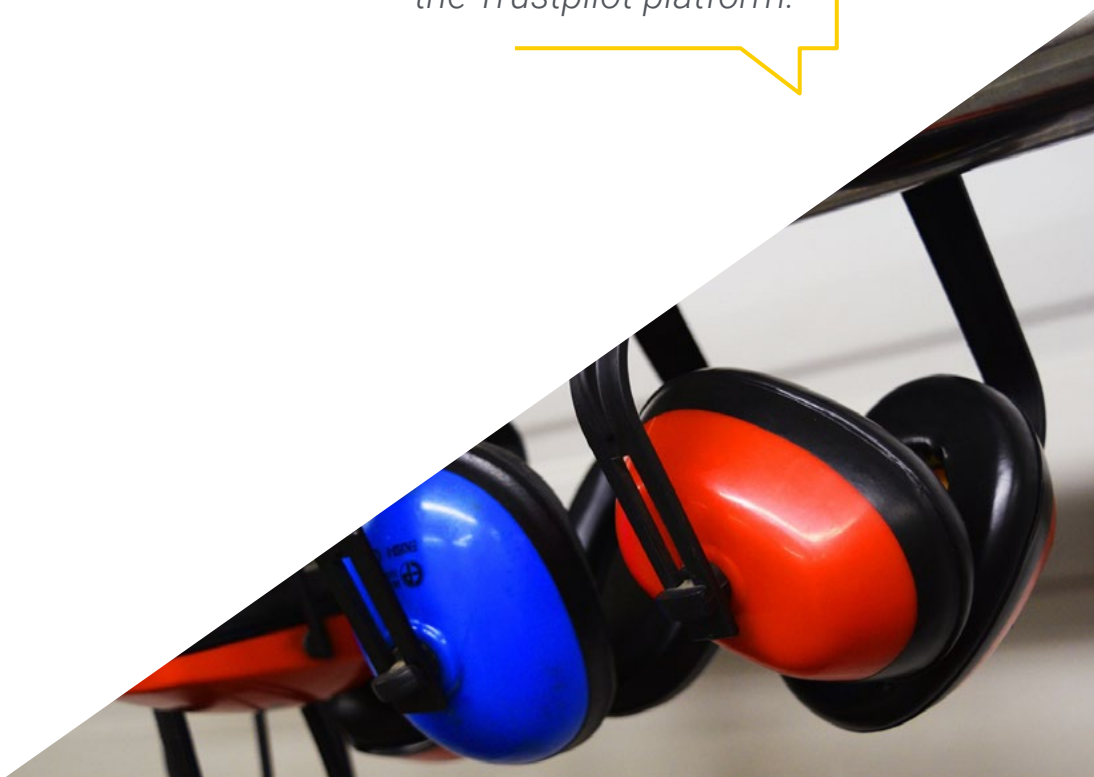
Get up to date on the development of acoustic insulation tests for airborne, impact and façade noise with TECH.

Don't wait any longer and enroll now in the best rated university in the world by its students according to the Trustpilot platform.

The program includes in its teaching staff professionals of the field who pour into this training the experience of their work, in addition to recognized specialists from reference societies and prestigious universities.

Its multimedia content, developed with the latest educational technology, will allow the professional a situated and contextual learning, that is, a simulated environment that will provide an immersive training programmed to train in real situations.

The design of this program focuses on Problem-Based Learning, in which the professional will have to try to solve the different professional practice situations that will arise throughout the academic course. For this purpose, the student will be assisted by an innovative interactive video system created by renowned experts.



02

Objectives

This TECH Global University program will provide the most complex theoretical and practical criteria when developing an Acoustic Measurement. Specifically, the syllabus will delve into the most advanced instruments for the evaluation of environmental noise and the prospection of its consequences. Through these study materials, students will acquire specific skills for the planning, deployment and execution of sound tests. Additionally, access to the contents will be autonomous, allowing a more personalized management of knowledge, in correspondence with individualized schedules and interests.

After completing this Postgraduate Diploma you will be able to fully manage sound and environmental noise limiters"

General Objectives

- Develop the laws of physical acoustics that explain the behavior of sound waves such as the acoustic wave equation
- Develop the necessary knowledge on the handling of the essential concepts of sound generation and propagation in fluid media and the models that describe the behavior of sound waves in these media, both in their free propagation and in their interaction with matter from the formal and mathematical point of view
- Determine the nature and peculiarities of the acoustic elements of a system
- Familiarize the student with the terminology and analytical methods to solve acoustic problems
- Analyze the nature of sound sources and human perception
- Conceptualize noise and sound within sound reception
- Distinguish the particularities that affect the psychoacoustic perception of sounds
- Identify and specify the indexes and units of measurement necessary to quantify sound and its effects on sound propagation
- Compile the different acoustic measurement systems and their operating characteristics
- Provide a rationale for the correct use of the appropriate instruments for a specific measurement
- Delve into the methods and tools of digital processing to obtain acoustic parameters
- Evaluate the different acoustic parameters through digital signal processing systems
- Establish the correct criteria for acoustic data acquisition through quantification and sampling
- Provide a solid understanding of the fundamentals and key concepts related to audio recording and the instrumentation used in recording studios
- Promote up-to-date knowledge of the constantly evolving technology in the field of audio recording and associated instrumentation
- Determine the protocols for handling advanced recording equipment and their application in practical acoustical engineering situations
- Analyze and classify the main sources of environmental noise and their consequences
- Measure environmental noise using appropriate acoustic indicators

You will learn in depth about the most commonly used devices for noise measurement, such as sound level meters and dosimeters"

Specific Objectives

Module 1. Psychoacoustics and Acoustic Signal Detection

- Develop the concept of noise and the characteristics of sound propagation
- Specify how to add and subtract complex sounds and how to assess background noise
- Measure objective and subjective sounds with appropriate units and correlate them with each other using isophonic curves
- Evaluate the effects of frequency and temporal masking and its effect on perception

Module 2. Advanced Acoustic Instrumentation

- Analyze the different noise descriptors and their measurement
- Evaluate the behavior of time and frequency weightings in measurement
- Apply with fluency the general regulations that define instrumentation and its measurements
- Establish the correct use of a spectrum analyzer to identify noise sources, determine the degree of transmission through a structure or evaluate an acoustic treatment

Module 3. Acoustic Installations and Testing

- Evaluate the spectral adaptation term C and Ctr in acoustic reports and tests
- Distinguish the planning of various noise tests depending on whether they are airborne or structural transmission tests on various building elements or environments (facades, impact, etc.) for the choice of measurement equipment and test set-up
- Develop the procedures for measuring TRs in various environments
- Analyze the various noise limiting equipment and their application and peripherals
- Define the contents and minimum requirements of acoustic studies and reports and evaluate the results obtained in the tests

03

Course Management

All teachers in this program have extensive experience in the field of Acoustic Engineering. Throughout their professional careers, they have successfully participated in different projects aimed at environmental noise control and tests to limit the noise impact of industries on the population and workers. Based on their expertise, they have developed a disruptive syllabus and first class complementary materials. Through this rigorous academic guide, students will complete all the study objectives in the most complete and efficient way.

The teachers of this program have a vast experience and international prestige in the field of Acoustics and its measurement tools"

Management

Mr. Espinosa Corbellini, Daniel

- Expert Consultant in Audio Equipment and Room Acoustics
- Professor at the School of Engineering of Puerto Real from the University of Cadiz
- Design Engineer at Coelan Electrical Installations Company
- Audio Technician in Sales and Installations in the Daniel Sonido company
- Industrial Technical Engineer in Industrial Electronics at the University of Cadiz
- Industrial Engineer in Industrial Organization by the University of Cadiz
- Official Master's Degree in Evaluation and Management of Noise Pollution by the University of Cadiz
- Official Master's Degree in Acoustic Engineering from the University of Cadiz and the University of Granada
- Diploma of Advanced Studies by the University of Cadiz

Professors

Dr. Aguilar Aguilera, Antonio

- Technical Architect Villanueva del Trabuco Town Hall's Department of Works and Urbanism
- Teaching and Research Staff at the University of Granada
- Researcher of the group TEP-968 Technologies for the Circular Economy (TEC)
- Professor in the Degree in Building Engineering in the Department of Architectural Constructions of the University of Granada in the subjects of Organization and Programming in Building and Prevention and Safety
- Professor in the Degree in Physics in the Department of Applied Physics of the University of Granada in the subject of Physics of the Environment
- Andrés Lara Prize, awarded by the Spanish Society of Acoustics (SEA), for the best paper in the field of Environmental Physics
- PhD in the Civil Engineering Program at the University of Granada
- Degree in Technical Architecture from the University of Granada
- Master's Degree in Management and Integral Safety in Building by the University of Granada
- Master's Degree in Acoustics Engineering from the University of Granada
- Professor in the Applied Physics Department of the Telecommunications Technology Engineering Degree in the Applied Physics to Telecommunications course

Dr. Cuervo Bernal, Ana Teresa

- Audiotec Technician
- Technician accredited by ENAC and the Generalitat de Catalunya (ECPCA), for the realization of acoustic measurements in all fields
- Sound teacher at the Film School "Cine en Acción"
- Master's Degree in Architectural and Environmental Acoustics by the University of La Salle in Barcelona
- Graduate in Acoustic Engineering from the San Buenaventura University of Bogota
- Diploma in Art and Visual Communication from San Buenaventura University of Bogota Diploma in Audiovisual Production by Cine en Acción Barcelona
- Diploma in Audiovisual Sound by Cine en Acción Barcelona

Mr. Arroyo Chuquin, Jorge Santiago

- Consultant and Acoustical Designer at AKUO Acoustical Engineering
- Career Coordinator in the Higher Technology in Sound and Acoustics
- Master's Degree in Technology and Educational Innovation from the Technical University of the North
- Engineer in Sound and Acoustics from the University of the Americas

A unique, key, and decisive educational experience to boost your professional development"

04

Structure and Content

This 100% online program delves into the basic principles of acoustics, from the nature of sound and noise to the measurement of their levels in decibels (dB). At the same time, another of its academic modules focuses on the measurement of pressure and intensity, as well as vibrations and the use of microphones. Finally, the syllabus delves into the planning and development of insulation tests, the evaluation of noise transmission and its control by means of limiters. All this with an academic itinerary that provides the most complete study platform, where explanatory videos, complementary readings and other multimedia resources are displayed.

Relearning and the case study method applied by TECH will allow you to consolidate skills quickly and flexibly"

Module 1. Psychoacoustics and Acoustic Signal Detection

1.1. Noise Sources
- 1.1.1. Sound Transmission Rate, Pressure and Wavelength
- 1.1.2. Noise Background Noise
- 1.1.3. Omnidirectional Noise Source. Power and Sound Intensity
- 1.1.4. Acoustic Impedance for Plane Waves

1.2. Sound Measurement Levels
- 1.2.1. Weber-Fechner Law. The Decibel
- 1.2.2. Sound Pressure Level
- 1.2.3. Sound Intensity Level
- 1.2.4. Sound Power Level

1.3. Measurement of the Acoustic Field in Decibels (Db)
- 1.3.1. Sum of Different Levels
- 1.3.2. Sum of Equal Levels
- 1.3.3. Subtraction of Levels. Correction for Background Noise

1.4. Binaural Acoustics
- 1.4.1. Structure of the Aural Model
- 1.4.2. Range and Sound Pressure-Frequency Relationship
- 1.4.3. Detection Thresholds and Exposure Limits
- 1.4.4. Physical Model

1.5. Psychoacoustic and Physical Measurements
- 1.5.1. Loudness and Loudness Level. Phones
- 1.5.2. Pitch and Frequency. Timbre. Spectral Range
- 1.5.3. Equal Loudness Curves (Isophonic). Fletcher and Munson and Others

1.6. Acoustic Perceptual Properties
- 1.6.1. Sound Masking. Tones and Noise Bands
- 1.6.2. Temporal Masking. Pre and Post Masking
- 1.6.3. Frequency Selectivity of the Ear. Critical Bands
- 1.6.4. Non-linear Perceptual and Other Effects. Hass Effect and Doppler Effect

1.7. The Phonatory System
- 1.7.1. Mathematical Model of the Vocal Tract
- 1.7.2. Emission Times, Dominant Spectral Content and Emission Level
- 1.7.3. Directivity of the Vocal Emission. Polar Curve

1.8. Spectral Analysis and Frequency Bands
- 1.8.1. Frequency Weighting Curves A (dBA). Other Spectral Weightings
- 1.8.2. Spectral Analysis by Octaves and thirds of Octave. Octave Concept
- 1.8.3. Pink Noise and White Noise
- 1.8.4. Other Noise Bands Used in Signal Detection and Analysis

1.9. Atmospheric Attenuation of Sound in a Free Field
- 1.9.1. Attenuation Due to Temperature and Atmospheric Pressure Variation in the Speed of Sound
- 1.9.2. Air Absorption Effect
- 1.9.3. Attenuation Due to Height Above the Ground and Wind Velocity
- 1.9.4. Attenuation Due to Turbulence, Rain, Snow or Vegetation
- 1.9.5. Attenuation Due to Noise Barriers or Terrain Variation Due to Interference

1.10. Temporal Analysis and Acoustic Indices of Perceived Intelligibility
- 1.10.1. Subjective Perception of First Acoustic Reflections. Echo Zones
- 1.10.2. Floating Echo
- 1.10.3. Speech Intelligibility. Calculation of %ALCons and STI/RASTIIntelligibility of the Word

Module 2. Advanced Acoustic Instrumentation

2.1. Noise
- 2.1.1. Noise Descriptors by Energy Content Assessment: LAeq, SEL
- 2.1.2. Noise Descriptors by Temporal Variation Assessment: LAnT
- 2.1.3. Noise Categorization Curves: NC, PNC, RC and NR

2.2. Pressure Measurement
- 2.2.1. Sound Level Meter. General Description, Structure and Operation by Blocks
- 2.2.2. Frequency Weighting Analysis. Networks A, C, Z
- 2.2.3. Temporal Weighting Analysis. Slow, Fast, Impulse Networks
- 2.2.4. Integrating Sound Level Meter and Dosimeter (Laeq and SEL). Classes and Types. Regulations
- 2.2.5. Phases of Metrological Control Regulations
- 2.2.6. Calipers and Pistophones

2.3. Intensity Measurement
- 2.3.1. Intensimetry. Properties and Applications
- 2.3.2. Intensimetric Probes
  - 2.3.2.1. Pressure/Pressure and pressure/Velocity Types
- 2.3.3. Calibration Methods. Uncertainties

2.4. Sources of Acoustic Excitation
- 2.4.1. Dodecahedral Omnidirectional Source. International Regulations
- 2.4.2. Airborne Impulsive Sources. Gun and Acoustic Balloons
- 2.4.3. Structural Impulsive Sources. Impact Machine

2.5. Vibration Measurement
- 2.5.1. Piezoelectric Accelerometers
- 2.5.2. Displacement, Velocity and Acceleration Curves
- 2.5.3. Vibration Analyzers. Frequency Weightings
- 2.5.4. Parameters and Calibration

2.6. Measuring Microphones
- 2.6.1. Types of Measuring Microphones
  - 2.6.1.1. The Condenser and Pre-polarized Microphone. Basis of Operation
- 2.6.2. Design and Construction of Microphones
  - 2.6.2.1. Diffuse Field, Random Field and Pressure Field
- 2.6.3. Sensitivity, Response, Directivity, Range and Stability
- 2.6.4. Environmental and Operator Influences. Measurement with Microphones

2.7. Acoustic Impedance Measurement
- 2.7.1. Impedance Tube Methods (Kundt): Standing Wave Range Method
- 2.7.2. Determination of Sound Absorption Coefficient at Normal Incidence. ISO 10534-2:2002 Transfer Function Method
- 2.7.3. Surface Method: Impedance Gun

2.8. Acoustic Measuring Chambers
- 2.8.1. Anechoic Chamber. Design and Materials
- 2.8.2. Semi-Anechoic Chamber. Design and Materials
- 2.8.3. Reverberation Chamber. Design and Materials

2.9. Other Measurement Systems
- 2.9.1. Automatic and Autonomous Measurement Systems for Environmental Acoustics
- 2.9.2. Measurement Systems Using Data acquisition Cards and Software
- 2.9.3. Systems Based on Simulation Software

2.10. Uncertainty in Acoustic Measurement
- 2.10.1. Sources of Uncertainty
- 2.10.2. Reproducible and Non-Reproducible Measurements
- 2.10.3. Direct and Indirect Measurements

Module 3. Acoustic Installations and Testing

3.1. Acoustic Study and Reports
- 3.1.1. Types of Acoustic Technical Reports
- 3.1.2. Contents of Studies and Reports
- 3.1.3. Types of Acoustic Tests

3.2. Planning and Development of Airborne Sound Insulation Tests
- 3.2.1. Measurement Requirements
- 3.2.2. Recording of Results
- 3.2.3. Test Report

3.3. Evaluation of the Global Magnitudes for Airborne Sound Insulation in Buildings and Building Elements
- 3.3.1. Procedure for the Evaluation of Global Magnitudes
- 3.3.2. Comparison Method
- 3.3.3. Spectral Fitting Terms (C or Ctr)
- 3.3.4. Results Evaluation

3.4. Planning and Development of Impact Sound Insulation Tests
- 3.4.1. Measurement Requirements
- 3.4.2. Recording of Results
- 3.4.3. Test Report

3.5. Evaluation of the Global Magnitudes for Impact Sound Insulation in Buildings and Building Elements
- 3.5.1. Procedure for the Evaluation of Global Magnitudes
- 3.5.2. Comparison Method
- 3.5.3. Results Evaluation

3.6. Planning and Development of Airborne Sound Insulation Tests facades
- 3.6.1. Measurement Requirements
- 3.6.2. Recording of Results
- 3.6.3. Test Report

3.7. Planning and Development of Reverberation Time Tests
- 3.7.1. Measurement Requirements: Showgrounds
- 3.7.2. Measurement Requirements: Ordinary Enclosures
- 3.7.3. Measurement Requirements: Open-plan Offices
- 3.7.4. Recording of Results
- 3.7.5. Test Report

3.8. Planning and Development of Speech Transmission Index (STI) Measurement Tests in Enclosures
  3.8.1. Measurement Requirements
  3.8.2. Recording of Results
  3.8.3. Test Report
3.9. Planning and Development of Tests for the Evaluation of the Transmission of Interior Noise to the Exterior
  3.9.1. Basic Measurement Requirements
  3.9.2. Recording of Results
  3.9.3. Test Report
3.10. Noise Control
  3.10.1. Types of Sound Limiters
  3.10.2. Sound Limiters
    3.10.2.1. Peripherals
  3.10.3. Environmental Noise Meter

Access now to the academic community of the best online university in the world according to Forbes magazine"

05

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"

Case Study to contextualize all content

Our program offers a revolutionary approach to developing skills and knowledge. Our goal is to strengthen skills in a changing, competitive, and highly demanding environment.

At TECH, you will experience a learning methodology that is shaking the foundations of traditional universities around the world"

You will have access to a learning system based on repetition, with natural and progressive teaching throughout the entire syllabus.

The student will learn to solve complex situations in real business environments through collaborative activities and real cases.

A learning method that is different and innovative

This TECH program is an intensive educational program, created from scratch, which presents the most demanding challenges and decisions in this field, both nationally and internationally. This methodology promotes personal and professional growth, representing a significant step towards success. The case method, a technique that lays the foundation for this content, ensures that the most current economic, social and professional reality is taken into account.

> *Our program prepares you to face new challenges in uncertain environments and achieve success in your career"*

The case method is the most widely used learning system in the best faculties in the world. The case method was developed in 1912 so that law students would not only learn the law based on theoretical content. It consisted of presenting students with real-life, complex situations for them to make informed decisions and value judgments on how to resolve them. In 1924, Harvard adopted it as a standard teaching method.

What should a professional do in a given situation? This is the question that you are presented with in the case method, an action-oriented learning method. Throughout the program, the studies will be presented with multiple real cases. They will have to combine all their knowledge and research, and argue and defend their ideas and decisions.

Relearning Methodology

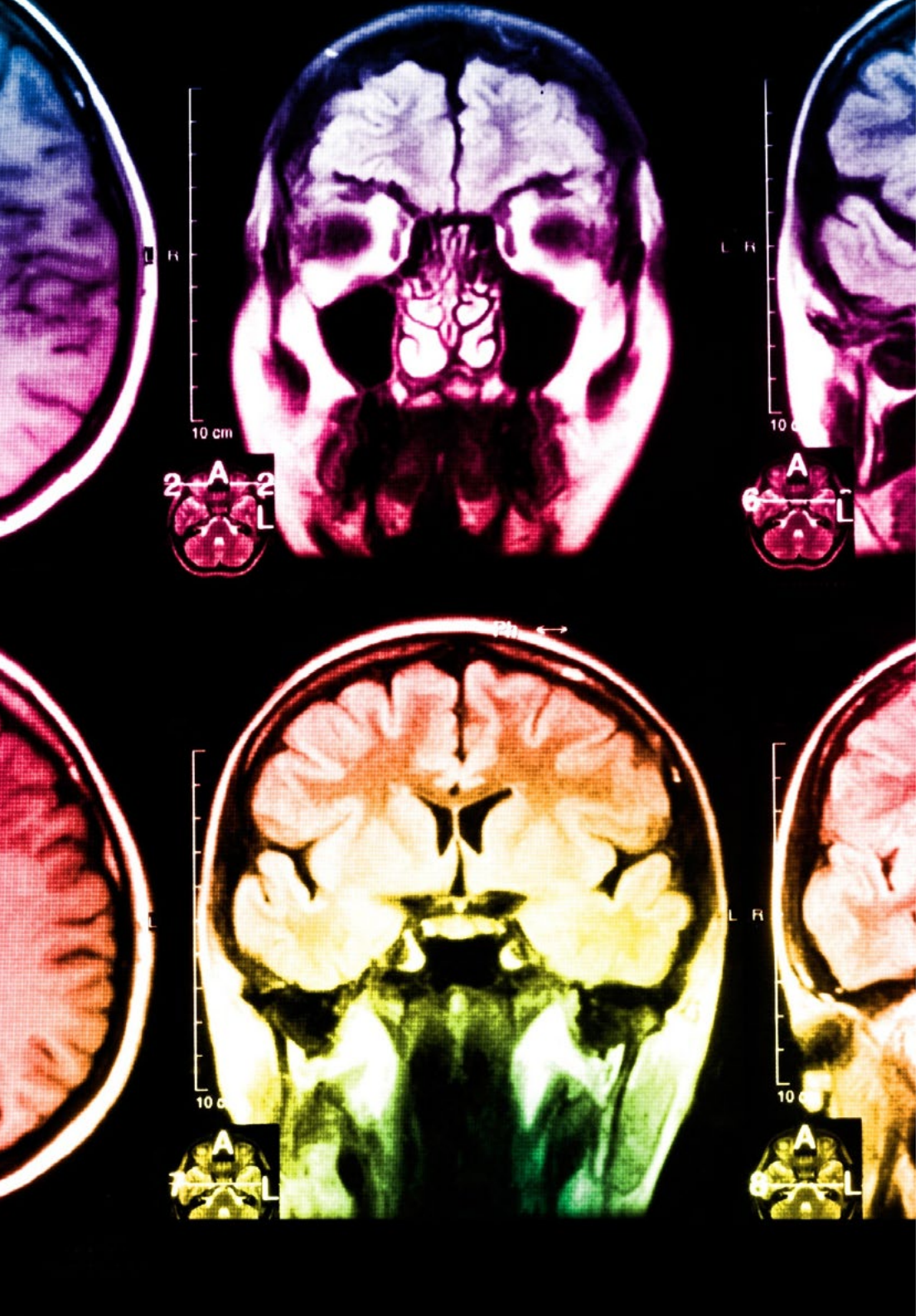
TECH effectively combines the Case Study methodology with a 100% online learning system based on repetition, which combines 8 different teaching elements in each lesson.

We enhance the Case Study with the best 100% online teaching method: Relearning.

In 2019, we obtained the best learning results of all online universities in the world.

At TECH, you will learn using a cutting-edge methodology designed to train the executives of the future. This method, at the forefront of international teaching, is called Relearning.

Our university is the only one in the world authorized to employ this successful method. In 2019, we managed to improve our students' overall satisfaction levels (teaching quality, quality of materials, course structure, objectives...) based on the best online university indicators.



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. This methodology has trained more than 650,000 university graduates with unprecedented success in fields as diverse as biochemistry, genetics, surgery, international law, management skills, sports science, philosophy, law, engineering, journalism, history, and financial markets and instruments. All this in a highly demanding environment, where the students have a strong socio-economic profile and an average age of 43.5 years.

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

From the latest scientific evidence in the field of neuroscience, not only do we know how to organize information, ideas, images and memories, but we know that the place and context where we have learned something is fundamental for us to be able to remember it and store it in the hippocampus, to retain it in our long-term memory.

In this way, and in what is called neurocognitive context-dependent e-learning, the different elements in our program are connected to the context where the individual carries out their professional activity.

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 highly 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.

Classes

There is scientific evidence suggesting that observing third-party experts can be useful.

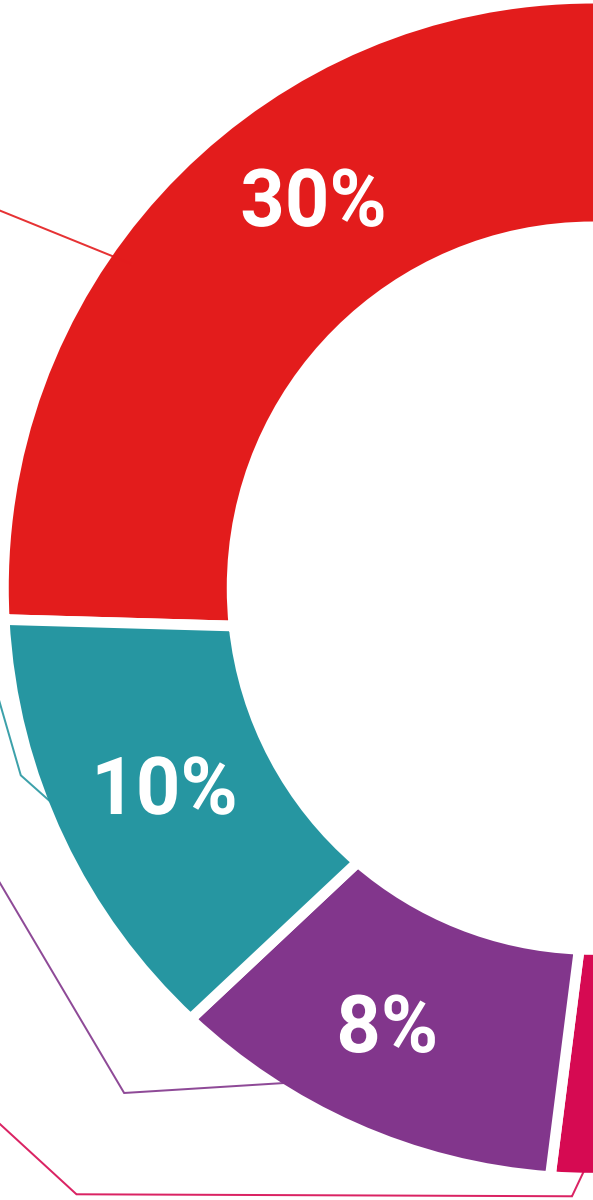
Learning from an Expert strengthens knowledge and memory, and generates confidence in future difficult decisions.

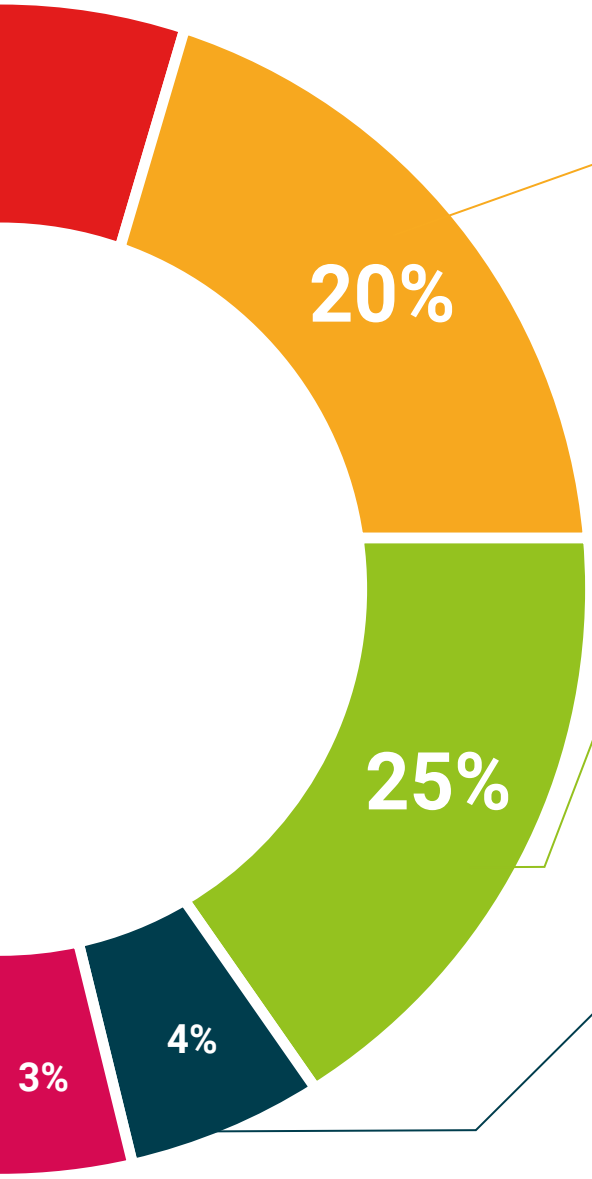
Practising Skills and Abilities

They will carry out activities to develop specific skills and abilities in each subject area. Exercises and activities to acquire and develop the skills and abilities that a specialist needs to develop in the context of the globalization that we are experiencing.

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.





Case Studies

Students will complete a selection of the best case studies chosen specifically for this program. Cases that are presented, analyzed, and supervised by the best specialists in the world.

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".

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.

06

Certificate

The Postgraduate Diploma in Acoustic Measurement guarantees students, in addition to the most rigorous and up-to-date education, access to a 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 program will allow you to obtain your **Postgraduate Diploma in Acoustic Measurement** 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.

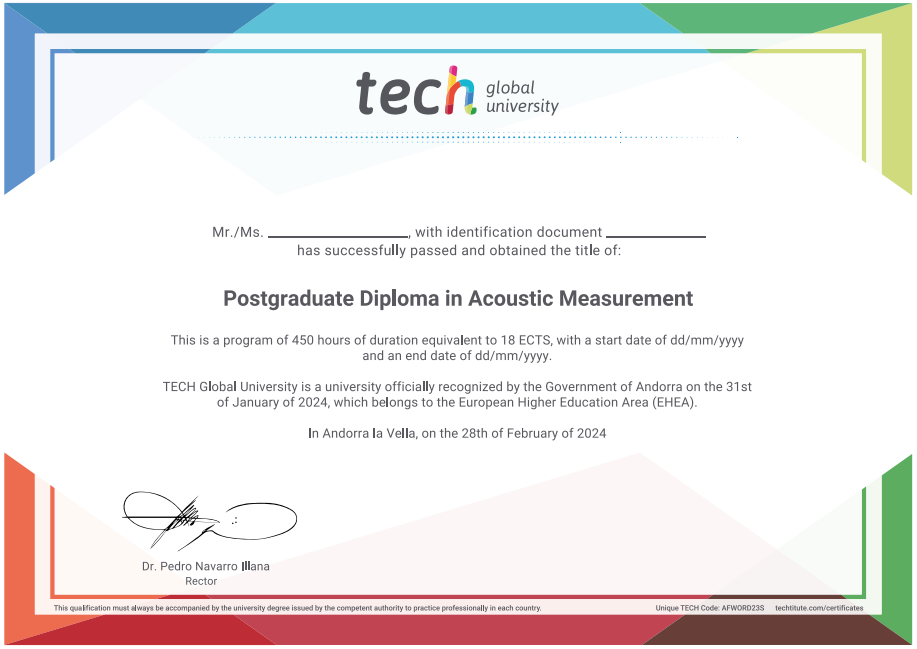
This **TECH Global University** title is a European program of continuing education and professional updating that guarantees the acquisition of competencies in its area of knowledge, providing a high curricular value to the student who completes the program.

Title: **Postgraduate Diploma in Acoustic Measurement**

Modality: **online**

Duration: **6 months**

Accreditation: **18 ECTS**


tech global university

Mr./Ms. _____, with identification document _____
has successfully passed and obtained the title of:

Postgraduate Diploma in Acoustic Measurement

This is a program of 450 hours of duration equivalent to 18 ECTS, with a start date of dd/mm/yyyy and an end date of dd/mm/yyyy.

TECH Global University is a university officially recognized by the Government of Andorra on the 31st of January of 2024, which belongs to the European Higher Education Area (EHEA).

In Andorra la Vella, on the 28th of February of 2024

Dr. Pedro Navarro Illana
Rector

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

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

tech global university

Postgraduate Diploma
Acoustic Measurement

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

Postgraduate Diploma
Acoustic Measurement

tech global university