Postgraduate Diploma
Signals and Communications

tech global university

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Postgraduate Diploma
Signals and Communications

- Modality: **online**
- Duration: **6 months**
- Certificate: **TECH Global University**
- Credits: **24 ECTS**
- Schedule: **at your own pace**
- Exams: **online**

Website: www.techtitute.com/us/information-technology/postgraduate-diploma/postgraduate-diploma-signals-communications

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01

Introduction

Telecommunication signals allow people and organizations to stay connected easily and without high cost. Developments in this field require specialized professionals who are up to date with the latest developments that are constantly emerging.
This Postgraduate Diploma brings students closer to the field of Signals and Communications, with an up-to-date and high-quality program. It is a comprehensive preparation course that seeks to prepare students for success in their profession.

If you are looking for quality education that will help you specialize in one of the fields with the most professional prospects, this is your best option"

Advances in telecommunications are happening all the time, as this is one of the fastest evolving areas. It is therefore necessary to have IT experts who can adapt to these changes and have first-hand knowledge of the new tools and techniques that are emerging in this field.

This Postgraduate Diploma in Signals and Communications addresses the complete range of topics involved in this field. Its study has a clear advantage over other programs that focus on specific blocks, which prevents students from knowing the interrelation with other areas included in the multidisciplinary field of telecommunications. In addition, the teaching team of this educational program has made a careful selection of each of the topics of this program in order to offer students the most complete study opportunity possible and always linked to current events.

This program is aimed at those interested in attaining a higher level of knowledge of Signals and Communications. The main objective of this Postgraduate Diploma is for students to specialize their knowledge in simulated work environments and conditions in a rigorous and realistic manner so that they can later apply it in the real world.

As it is a 100% online Postgraduate Diploma program, students are not constrained by fixed timetables or the need to move to another physical location, but can access the contents at any time of the day, balancing their professional or personal life with their academic life.

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

- The development of case studies presented by computer security experts
- 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 self-assessment can be used to improve learning
- Its special emphasis on innovative methodologies in Signals and Communication
- 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

Do not miss the opportunity to study this Postgraduate Diploma in Signals and Communications at TECH. It's the perfect opportunity to advance your career"

This Postgraduate Diploma is the best investment you can make when choosing a refresher program to update your existing knowledge of Signals and Communications"

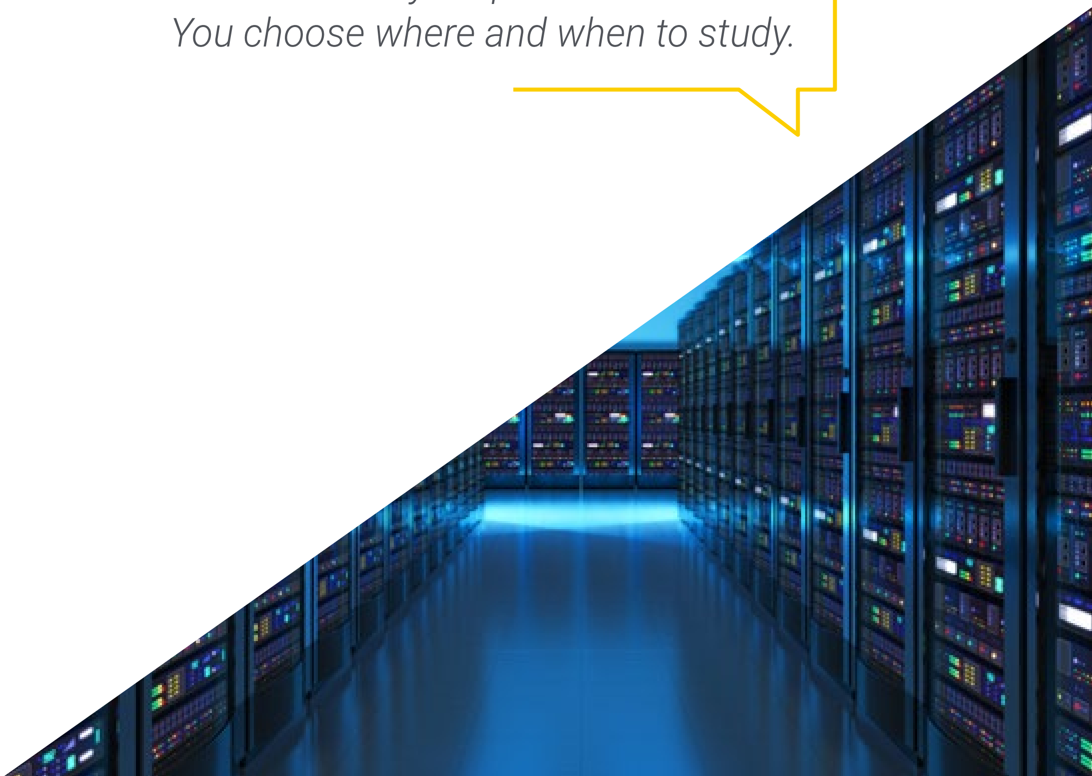
The teaching staff includes professionals from the field of design, who bring their experience to this specialization program, as well as renowned specialists from leading societies and prestigious universities.

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 immersive education programmed to learn in real situations.

This program is designed around Problem-Based Learning, whereby the professional must try to solve the different professional practice situations that arise during the academic year. To do so, professionals will be assisted by an innovative interactive video system created by renowned Signals and Communications experts.

This program comes with the best educational material, providing you with a contextual approach that will facilitate your learning.

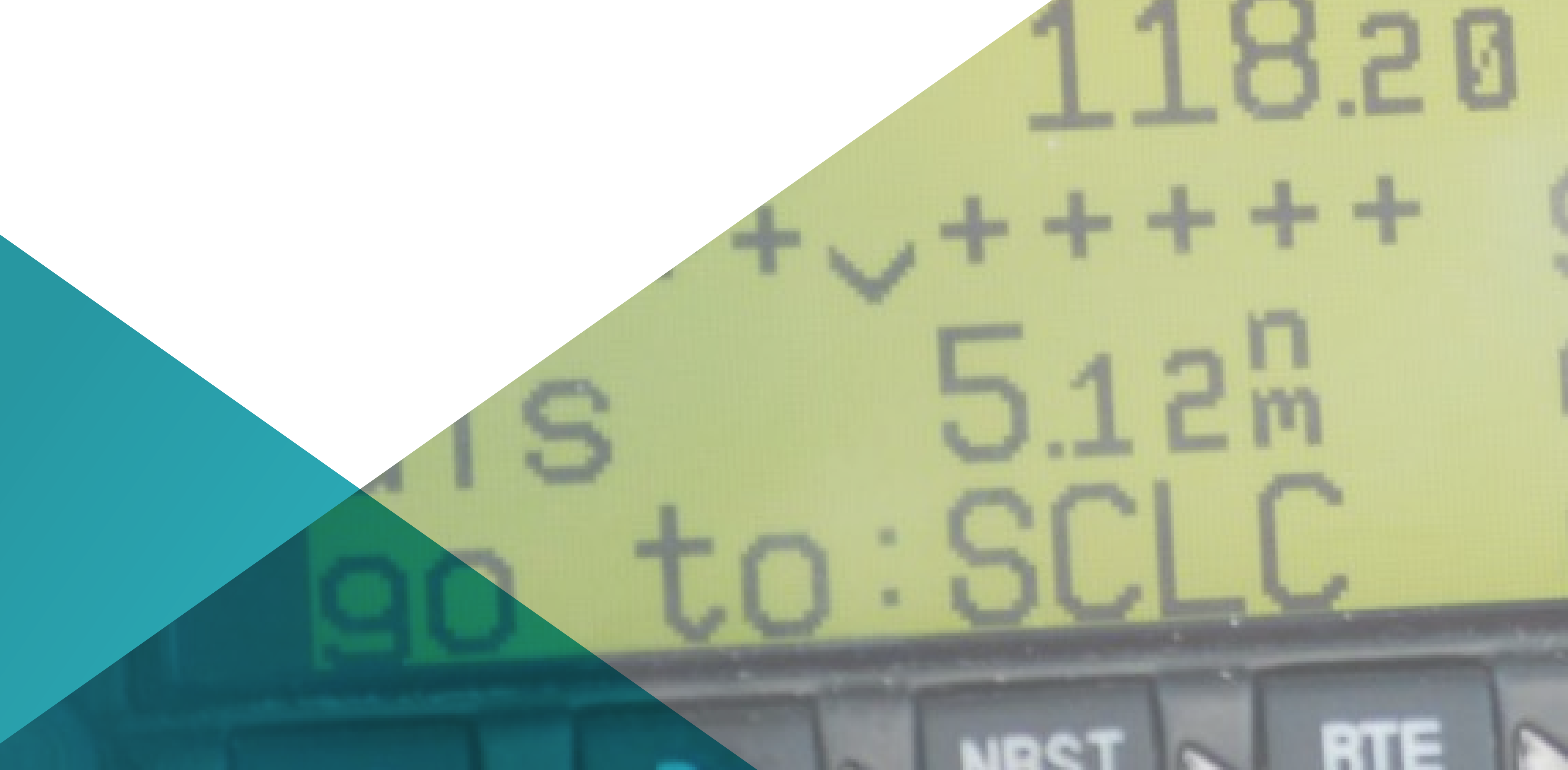
This 100% online Postgraduate Diploma will allow you to combine your studies with your professional work. You choose where and when to study.



02

Objectives

This Postgraduate Diploma in Signals and Communications is designed to facilitate professional performance in the field to acquire knowledge of the main developments in the sector.



Our goal is to make you the best professional in your sector. For this, we have the best methodology and content"

General Objective

- Prepare students to be able to develop their work with total security and quality in the field of Signals and Communications

Train in the world's leading private online university"

Specific Objectives

Module 1. Random Signals and Linear Systems

- Understand the fundamentals of Probability Calculation
- Know the basic theory of variables and vectors
- Know in depth the random processes and their temporal and spectral characteristics
- Apply the concepts of deterministic and random signals to the characterization of disturbances and noise
- Know the fundamental properties of the systems
- Master linear systems and the related functions and transforms
- Apply concepts of Linear Time Invariant Systems (LTI Systems) to model, analyze and predict processes

Module 2. Communication Theory

- Know the fundamental characteristics of the different types of signals
- Analyze the different disturbances that can occur in signal transmission
- Master the signal modulation and demodulation techniques
- Understand the Analog Communication Theory and its modulations
- Understand the Digital Communication Theory and its modulations
- Be able to apply this knowledge to specify, deploy and maintain communication systems and services

Module 3. Information Theory

- Definition of the basic concepts of information theory
- Analyze the processes of file transmission of information over discrete channels
- Understand in depth the method of reliable transmission over noisy channels
- Master the techniques for the detection and correction of transmission errors
- Assimilate the basic characteristics of retransmission protocols
- Know the techniques of text, image, sound and video compression

Module 4. Digital Signal Processing

- Know the basic concepts of signals and discrete time systems
- Understand linear systems and related functions and transforms
- Master numerical signal processing and continuous signal sampling
- Understand and know how to implement rational discrete systems
- Be able to analyze transformed domains, especially spectral analysis
- Master analog-to-digital and digital-to-analog signal processing technologies

03

Structure and Content

The structure of the contents has been designed by the best professionals in the sector the telecommunication, with extensive experience and recognized prestige in the profession.

We have the most complete and up-to-date educational program on the market. We strive for excellence and for you to achieve it too"

Module 1. Random Signals and Lineal Systems

1.1. Probability Theory
- 1.1.1. Concept of Probability. Probability Space
- 1.1.2. Conditional Probability and Independent Events
- 1.1.3. Total Probability Theorem. Bayes' Theorem
- 1.1.4. Compound Experiments. Bernoulli Tests

1.2. Random Variables
- 1.2.1. Random Variable Definition
- 1.2.2. Probability Distributions
- 1.2.3. Main Distributions
- 1.2.4. Functions of Random Variables
- 1.2.5. Moments of Random Variable
- 1.2.6. Generator Functions

1.3. Random Vectors
- 1.3.1. Random Vector Definition
- 1.3.2. Joint Distribution
- 1.3.3. Marginal Distributions
- 1.3.4. Conditional Distributions
- 1.3.5. Linear Correlation Between Two Variables
- 1.3.6. Normal Multivariant Distribution

1.4. Random Processes
- 1.4.1. Definition and Description of Random Processes
- 1.4.2. Random Processes in Discrete Time
- 1.4.3. Random Processes in Continuous Time
- 1.4.4. Stationary Processes
- 1.4.5. Gaussian Processes
- 1.4.6. Markovian Processes

1.5. Queuing Theory in Telecommunications
- 1.5.1. Introduction
- 1.5.2. Basic Concepts
- 1.5.2. Model Description
- 1.5.2. Example of the Application of Queuing Theory in Telecommunications

1.6. Random Processes. Temporal Characteristics
- 1.6.1. Concept of Random Process
- 1.6.2. Processes Qualification
- 1.6.3. Main Statistics
- 1.6.4. Stationarity and Independence
- 1.6.5. Temporary Averages
- 1.6.6. Ergodicity

1.7. Random Processes. Spectral Characteristic
- 1.7.1. Introduction
- 1.7.2 Power Density Spectrum
- 1.7.3. Properties of the Power Spectral Density
- 1.7.4. Relationship between the Power Spectrum and Autocorrelation

1.8. Signals and Systems. Properties
- 1.8.1. Introduction to Signals
- 1.8.2. Introduction to Systems
- 1.8.3. Basic Properties of Systems:
  - 1.8.3.1. Linearity
  - 1.8.3.2. Time Invariance
  - 1.8.3.3. Causality
  - 1.8.3.4. Stability
  - 1.8.3.5. Memory
  - 1.8.3.6. Invertibility

1.9. Lineal Systems with Random Inputs
- 1.9.1. Fundamentals of Linear Systems
- 1.9.2. Response to Linear Systems and Random Signals
- 1.9.3. Systems with Random Noise
- 1.9.4. Spectral Characteristics of the System Response
- 1.9.5. Equivalent Noise Bandwidth and Temperature
- 1.9.6. Noise Source Model

1.10. LTI Systems
- 1.10.1. Introduction
- 1.10.2. Discrete-Time LTI Systems
- 1.10.3. Continuous-Time LTI Systems
- 1.10.4. Properties of LTI Systems
- 1.10.5. Systems Described by Differential Equations

Module 2. Communication Theory

2.1. Introduction: Telecommunication Systems and Transmission Systems
- 2.1.1. Introduction
- 2.1.2. Basic Concepts and History
- 2.1.3. Telecommunication Systems
- 2.1.4. Transmission Systems

2.2. Signal Characterization
- 2.2.1. Deterministic vs. Random Signals
- 2.2.2. Periodic and Non-Periodic Signal
- 2.2.3. Energy and Power Signal
- 2.2.4. Baseband and Bandpass Signal
- 2.2.5. Basic Parameters of a Signal
  - 2.2.5.1. Average Value
  - 2.2.5.2. Average Energy and Power
  - 2.2.5.3. Maximum Value and Effective Value
  - 2.2.5.4. Energy and Power Spectral Density
  - 2.2.5.5. Power Calculation in Logarithmic Units

2.3. Disturbances in Transmission Systems
- 2.3.1. Ideal Channel Transmission
- 2.3.2. Classification of Disturbances
- 2.3.3. Lineal Distortion
- 2.3.4. Non-Lineal Distortion
- 2.3.5. Crosstalk and Interference
- 2.3.6. Noise
  - 2.3.6.1. Types of Noise
  - 2.3.6.2. Characterization
- 2.3.7. Narrow Band Pass Signals

2.4. Analog Communications. Concepts Concepts
- 2.4.1. Introduction
- 2.4.2. General Concepts

2.4.3. Baseband Transmission
2.4.3.1. Modulation and Demodulation
2.4.3.2. Characterization
2.4.3.3. Multiplexing
2.4.4. Mixers
2.4.5. Characterization
2.4.6. Types of Mixers

2.5. Analog Communications. Lineal Modulations
2.5.1. Basic Concepts
2.5.2. Amplitude Modulation (AM)
2.5.2.1. Characterization
2.5.2.2. Parameters
2.5.2.3. Modulation/Demodulation
2.5.3. Double Side Band (DSB) Modulation
2.5.3.1. Characterization
2.5.3.2. Parameters
2.5.3.3. Modulation/ Demodulation
2.5.4. Single Side Band (SSB) Modulation
2.5.4.1. Characterization
2.5.4.2. Parameters
2.5.4.3. Modulation/Demodulation
2.5.5. Vestigial Sideband Modulation (VSB)
2.5.5.1. Characterization
2.5.5.2. Parameters
2.5.5.3. Modulation/Demodulation
2.5.6. Quadrature Amplitude Modulation (QAM)
2.5.6.1. Characterization
2.5.6.2. Parameters
2.5.6.3. Modulation/Demodulation
2.5.7. Noise in Analog Modulations
2.5.7.1. Approach
2.5.7.2. Noise in DBL
2.5.7.3. Noise in BLU
2.5.7.4. Noise in AM

2.6. Analog Communications. Angular Modulations
2.6.1. Phase and Frequency Modulation
2.6.2. Narrow Band Angular Modulation
2.6.3. Spectrum Calculation
2.6.4. Generation and Demodulation
2.6.5. Angular Demodulation with Noise
2.6.6. Noise in PM
2.6.7. Noise in FM
2.6.8. Comparison between Analog Modulations

2.7. Digital Communication Introduction. Transmission Models
2.7.1. Introduction
2.7.2. Fundamental Parameters
2.7.3. Advantages of Digital Systems
2.7.4. Limitations of Digital Systems
2.7.5. PCM Systems
2.7.6. Modulations in Digital Systems
2.7.7. Demodulations in Digital Systems

2.8. Digital Communication Digital Base Band Transmission
2.8.1. PAM Binary Systems
2.8.1.1. Characterization
2.8.1.2. Signal Parameters
2.8.1.3. Spectral Model
2.8.2. Binary Receptor per Basic Sample
2.8.2.1. Bipolar NRZ
2.8.2.2. Bipolar RZ
2.8.2.3. Error Rate
2.8.3. Optimal Binary Receptor
2.8.3.1. Context
2.8.3.2. Error Rate Calculation
2.8.3.3. Optimal Receptor Filter Design
2.8.3.4. SNR Calculation
2.8.3.5. Loans
2.8.3.6. Characterization

2.8.4. M-PAM Systems
 2.8.4.1. Parameters
 2.8.4.2. Constellations
 2.8.4.3. Optimal Receptor
 2.8.4.4. Bit Error Ratio (BER)
2.8.5. Signal Vectorial Space
2.8.6. Constellation of a Digital Modulation
2.8.7. M-Signal Receptors

2.9. Digital Communication Digital Bandpass Transmission. Digital Modulations
2.9.1. Introduction
2.9.2. ASK Modulation
 2.9.2.1. Characterization
 2.9.2.2. Parameters
 2.9.2.3. Modulation/Demodulation
2.9.3. QAM Modulation
 2.9.3.1. Characterization
 2.9.3.2. Parameters
 2.9.3.3. Modulation/Demodulation
2.9.4. PSK Modulation
 2.9.4.1. Characterization
 2.9.4.2. Parameters
 2.9.4.3. Modulation/Demodulation
2.9.5. FSK Modulation
 2.9.5.1. Characterization
 2.9.5.2. Parameters
 2.9.5.3. Modulation/Demodulation
2.9.6. Other Digital Modulations
2.9.7. Comparison between Digital Modulations

2.10. Digital Communication Comparison, IS, Diagram and
2.10.1. Comparison between Digital Modulations
 2.10.1.1. Modulation Energy and Power
 2.10.1.2. Enveloping
 2.10.1.3. Protection Against Noise
 2.10.1.4. Spectral Model
 2.10.1.5. Channel Codification Techniques
 2.10.1.6. Synchronization Signals
 2.10.1.7. SER Symbol Error Rate
2.10.2. Limited Bandwidth Channels
2.10.3. Interference between Symbols (IS)
 2.10.3.1. Characterization
 2.10.3.2. Limitations
2.10.4. Optimal Receptor in PAM without IS
2.10.5. Eye Diagrams

Module 3: Information Theory

3.1. Introduction to Information Theory
3.1.1. Communications System Reference Model
3.1.2. Information Sources
3.1.3. Communication Channels
3.1.4. Source Coding Concept
3.1.5. Channel Codification Concept

3.2. Shannon Entropy
3.2.1. Introduction
3.2.2. Definition
3.2.3. Entropy Function Choice
3.2.4. Properties

3.3. Source Coding
3.3.1. Block Codes
3.3.2. Shannon's First Theorem: Optimal Codes
3.3.3. Huffman's Algorithm
3.3.4. Entropy of a Stochastic Process and of Markov Chain

3.4. Channel Capacity
3.4.1. Mutual Information
3.4.2. Information Processing Theorem
3.4.3. Channel Capacity
3.4.4. Capacity Calculation

3.5. Noise Channel
- 3.5.1. Reliable Transmission on an Unreliable Medium
- 3.5.2. Shannon's Second Theorem
- 3.5.3. Capacity Limit of a Noise Channel
- 3.5.4. Optimal Decoding

3.6. Error Control with Linear Codes
- 3.6.1. Introduction
- 3.6.2. Linear Codes
- 3.6.3. Generator and Parity Check Matrix
- 3.6.4. Syndrome Decoding
- 3.6.5. Typical Matrix
- 3.6.6. Error Detection and Correction
- 3.6.7. Error Probability
- 3.6.8. Hamming Codes
- 3.6.9. MacWilliams' Identity
- 3.6.10. Distance Dimensions

3.7. Error Control with Cyclic Codes
- 3.7.1. Matrix Definition and Description
- 3.7.2. Systematic Cyclic Codes
- 3.7.3. Encoding Circuits
- 3.7.4. Error Detection
- 3.7.5. Cyclic Code Decoding
- 3.7.6. Cyclic Structure of Hamming Codes
- 3.7.7. Shortened and Irreducible Cyclic Codes
- 3.7.8. Cyclic, Ring and Ideal Codes

3.8. Data Forwarding Strategies
- 3.8.1. Introduction
- 3.8.2. ARQ Strategies
- 3.8.3. Types of ARQ Strategies
  - 3.8.3.1. Stop and Wait
  - 3.8.3.2. Continuous Sending with Simple Rejection
  - 3.8.3.3. Continuous Sending with Selective Rejection
- 3.8.4. Efficient Cadence Analysis

3.9. Source Compression: Audio, Image and Video
- 3.9.1. Introduction
- 3.9.2. Audio
  - 3.9.2.1. Audio Formats
  - 3.9.2.2. Audio Compression Standards (MP3)
- 3.9.3. Image
  - 3.9.3.1. Image Formats
  - 3.9.3.2. Image Compression Standards (JPEG)
- 3.9.4. Video
  - 3.9.4.1. Video Formats
  - 3.9.4.2. Video Compression Standards (MPEG)
  - 3.9.4.3. MPEG Compression Techniques
  - 3.9.4.4. Coding Based on Transforms and DCT
  - 3.9.4.5. Entropy Coding (Huffman Coding)
  - 3.9.4.6. Other Compression Standards

3.10. Introduction to Reed Solomon and Convolutional Codes
- 3.10.1. Introduction to Reed Solomon Codes
- 3.10.2. Ratio and Reed Solomon Codes' Correction Capability
- 3.10.3. RS Encoding and Decoding with Matlab
- 3.10.4. Introduction to Convolutional Codes
- 3.10.5. Choice of Convolutional Codes

Module 4: Digital Signal Processing

4.1. Introduction
- 4.1.1. Meaning of "Digital Signal Processing"
- 4.1.2. Comparison between DSP and ASP
- 4.1.3. The History of DSP
- 4.1.4. Applications of DSP

4.2. Discrete Time Signals
- 4.2.1. Introduction
- 4.2.2. Sequence Classification
  - 4.2.2.1. Unidimensional and Multidimensional Sequences
  - 4.2.2.2. Odd and Even Sequences

4.6.5. Convolution by Means of DFT
4.6.5.1. Introduction
4.6.5.2. Circular Displacement
4.6.5.3. Circular Convolution
4.6.5.4. Frequency Domain Equivalent
4.6.5.5. Convolution through the Frequency Domain
4.6.5.6. Lineal Convolution through Circular Convolution
4.6.5.7. Summary and Example of Time Calculations
4.7. Rapid Fourier Transform
4.7.1. Introduction
4.7.2. Redundancy in DFT
4.7.3. Algorithm by Decomposition in Time
4.7.3.1. Algorithm Basis
4.7.3.2. Algorithm Development
4.7.3.3. Number of Complex Multiplications Required
4.7.3.4. Observations
4.7.3.5. Calculation Time
4.7.4. Variants and Adaptations of the Above Algorithm
4.8. Spectral Analysis
4.8.1. Introduction
4.8.2. Periodic Signals Coincident with the Sampling Window
4.8.3. Non-Coincident Periodic Signals with the Sampling Window
4.8.3.1. Spurious Content in the Spectrum and Use of Windows
4.8.3.2. Error Caused by the Continuous Component
4.8.3.3. Error in the Magnitude of the Non-Coincident Components
4.8.3.4. Spectral Analysis Bandwidth and Resolution
4.8.3.5. Increasing the Length of the Sequence by Adding Zeros
4.8.3.6. Application in a Real Signal
4.8.4. Stationary Random Signals
4.8.4.1. Introduction
4.8.4.2. Power Spectral Density
4.8.4.3. Periodogram
4.8.4.4. Independence of Samples
4.8.4.5. Feasibility of Averaging
4.8.4.6. Scaling Factor of the Periodogram Formula
4.8.4.7. Modified Periodogram
4.8.4.8. Averaging with Overlap
4.8.4.9. Welch Method
4.8.4.10. Segment Size
4.8.4.11. Implementation in MATLAB
4.8.5. Non-Stationary Random Signals
4.8.5.1. STFT
4.8.5.2. Graphic Representation of the STFT
4.8.5.3. Implementation in MATLAB
4.8.5.4. Spectral and Temporal Resolution
4.8.5.5. Other Methods
4.9. Design of FIR Filters
4.9.1. Introduction
4.9.2. Mobile Average
4.9.3. Lineal Relationship between Phase and Frequency
4.9.4. Lineal Phase Requirement
4.9.5. Window Method
4.9.6. Frequency Sample Method
4.9.7. Optimal Method
4.9.8. Comparison between the Previous Design Methods
4.10. Design of IIR Filters
4.10.1. Introduction
4.10.2. Design of First Order IIR Filters
4.10.2.1. Low-Pass Filters
4.10.2.2. High-Pass Filters

4.10.3. The Z Transform
    4.10.3.1. Definition
    4.10.3.2. Existence
    4.10.3.3. Rational Functions of Z, Zeros and Poles
    4.10.3.4. Displacements of a Sequence
    4.10.3.5. Transfer Functions
    4.10.3.6. Start of TZ Operation
4.10.4. Bilinear Transformation
    4.10.4.1. Introduction
    4.10.4.2. Deduction and Validation of the Bilinear Transformation
4.10.5. Design of Butterworth-Type Analog Filters
4.10.6. Butterworth-Type IIR Low-Pass Filter Design Example
    4.10.6.1. Specifications of Digital Filters
    4.10.6.2. Transition to Analog Filter Specifications
    4.10.6.3. Design of Analog Filters
    4.10.6.4. Transformation of Ha(s) to H(z) Using TB
    4.10.6.5. Verification of Compliance with Specifications
    4.10.6.6. Digital Filter Difference Equation
4.10.7. Automated Design of IIR Filters
4.10.8. Comparison between FIR Filters and IIR Filters
    4.10.8.1. Efficiency
    4.10.8.2. Stability
    4.10.8.3. Sensitivity to Coefficient Quantification
    4.10.8.4. Distortion of Wave Form

"This training will allow you to advance in your career comfortably"

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 goalt 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 has been the most widely used learning system among the world's leading Information Technology schools for as long as they have existed. 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 course, students 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

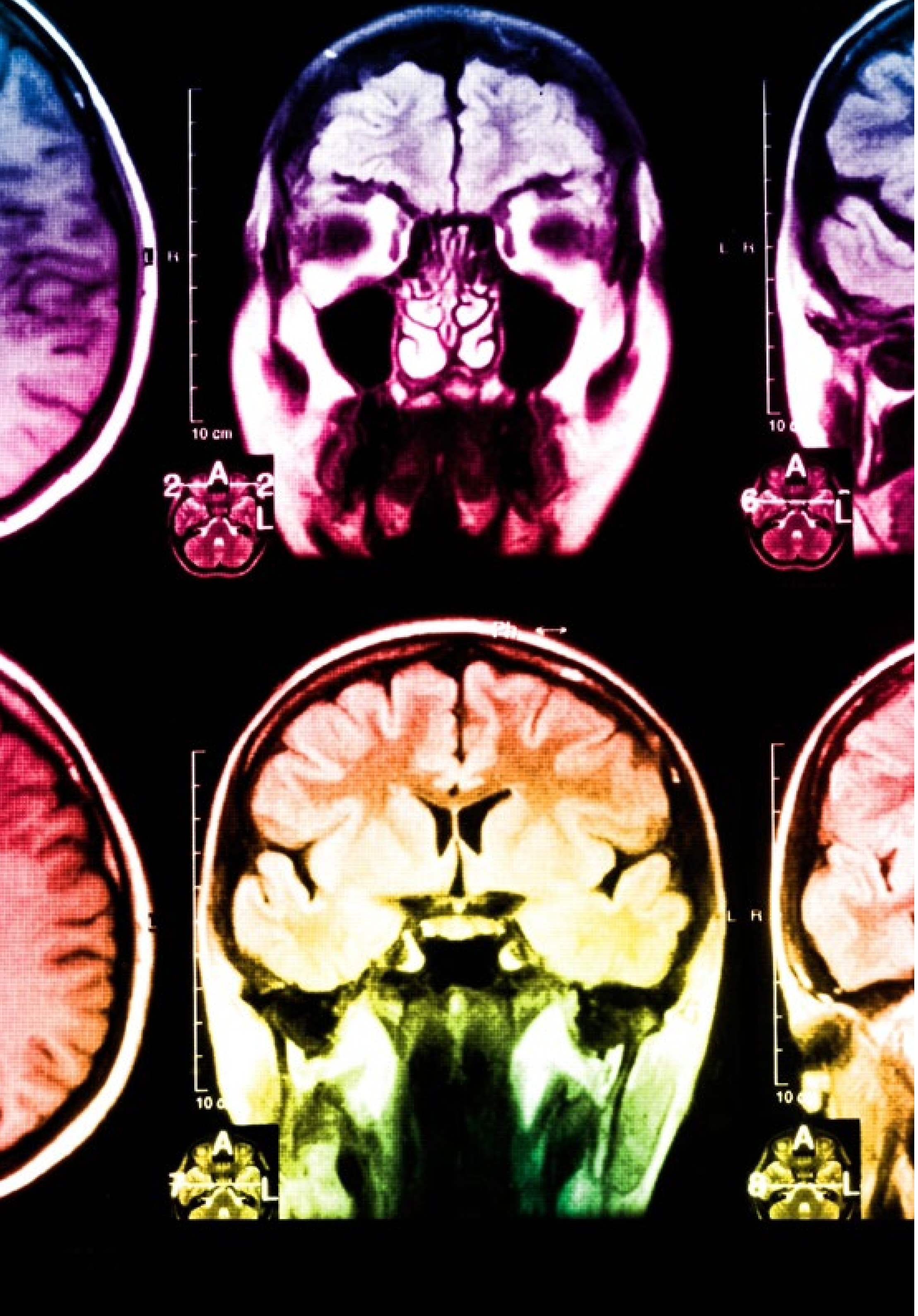
TECH effectively combines the Case Study methodology with a 100% online learning system based on repetition, which combines different teaching elements in each lesson.

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.

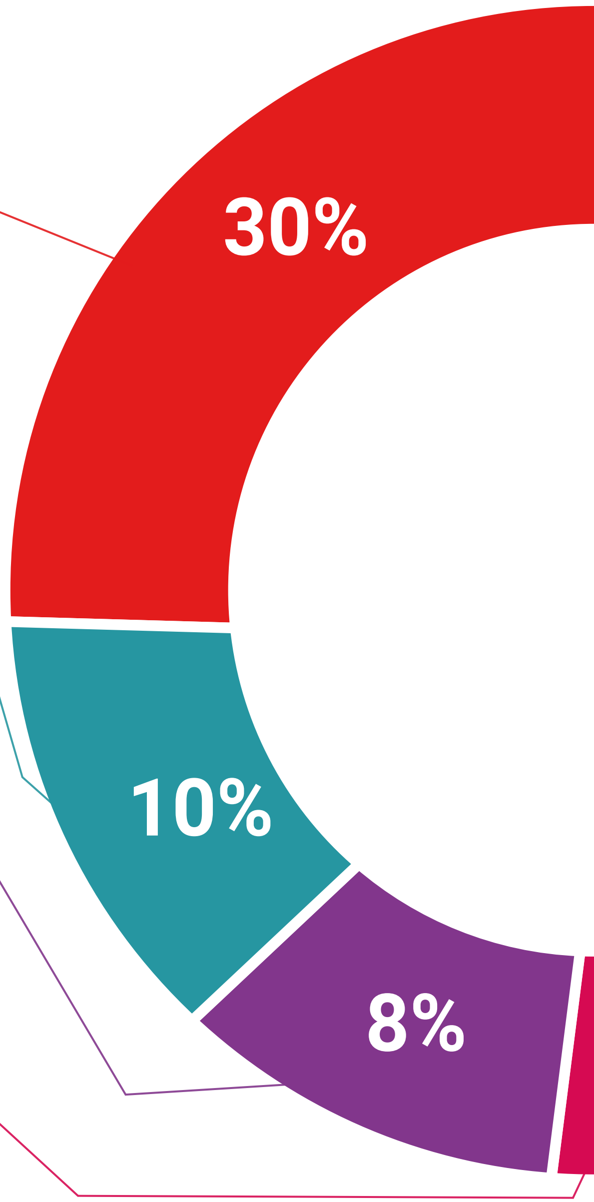
Learning from an Expert strengthens knowledge and memory, and generates confidence in future difficult decisions.

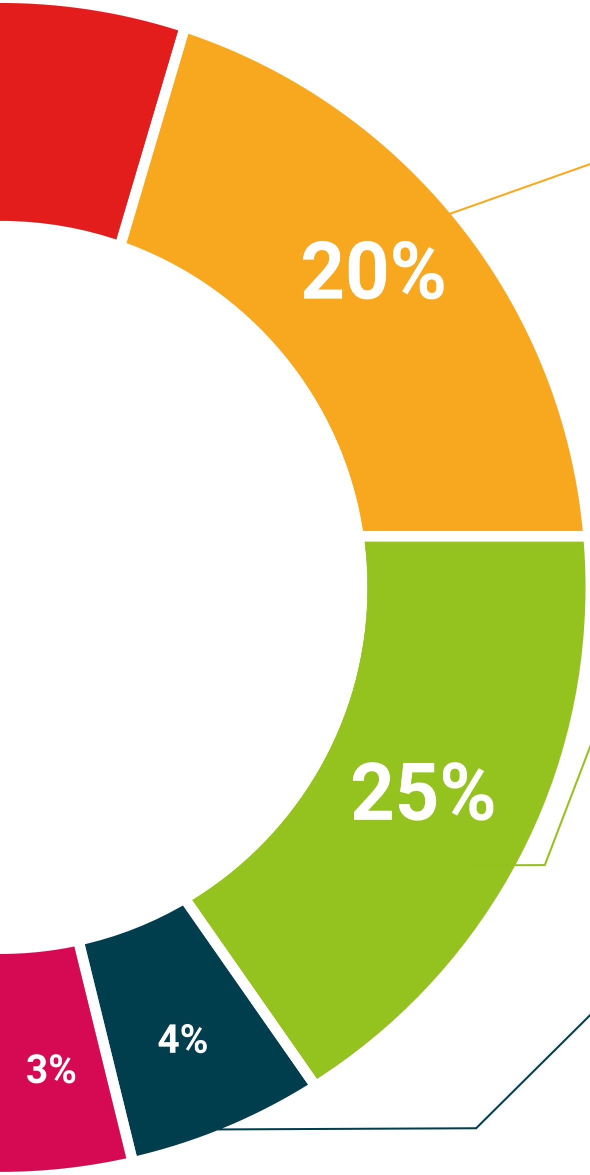
Practising Skills and Abilities

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.

05
Certificate

The Postgraduate Diploma in Signals and Communication 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 Signals and Communication** 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 Signals and Communication**

Modality: **online**

Duration: **6 months**

Accreditation: **24 ECTS**


tech global university

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

Postgraduate Diploma in Signals and Communication

This is a program of 600 hours of duration equivalent to 24 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
Chancellor

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.

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Postgraduate Diploma
Signals and Communications

- Modality: **online**
- Duration: **6 months**
- Certificate: **TECH Global University**
- Credits: **24 ECTS**
- Schedule: **at your own pace**
- Exams: **online**

Postgraduate Diploma
Signals and Communications

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