Postgraduate Diploma
Electronics

tech technological university

tech technological university

Postgraduate Diploma
Electronics

- Modality: **online**
- Duration: **6 months**
- Certificate: **TECH Technological University**
- Dedication: **16h/week**
- Schedule: **at your own pace**
- Exams: **online**

Website: www.techtitute.com/in/information-technology/postgraduate-diploma/postgraduate-diploma-electronics

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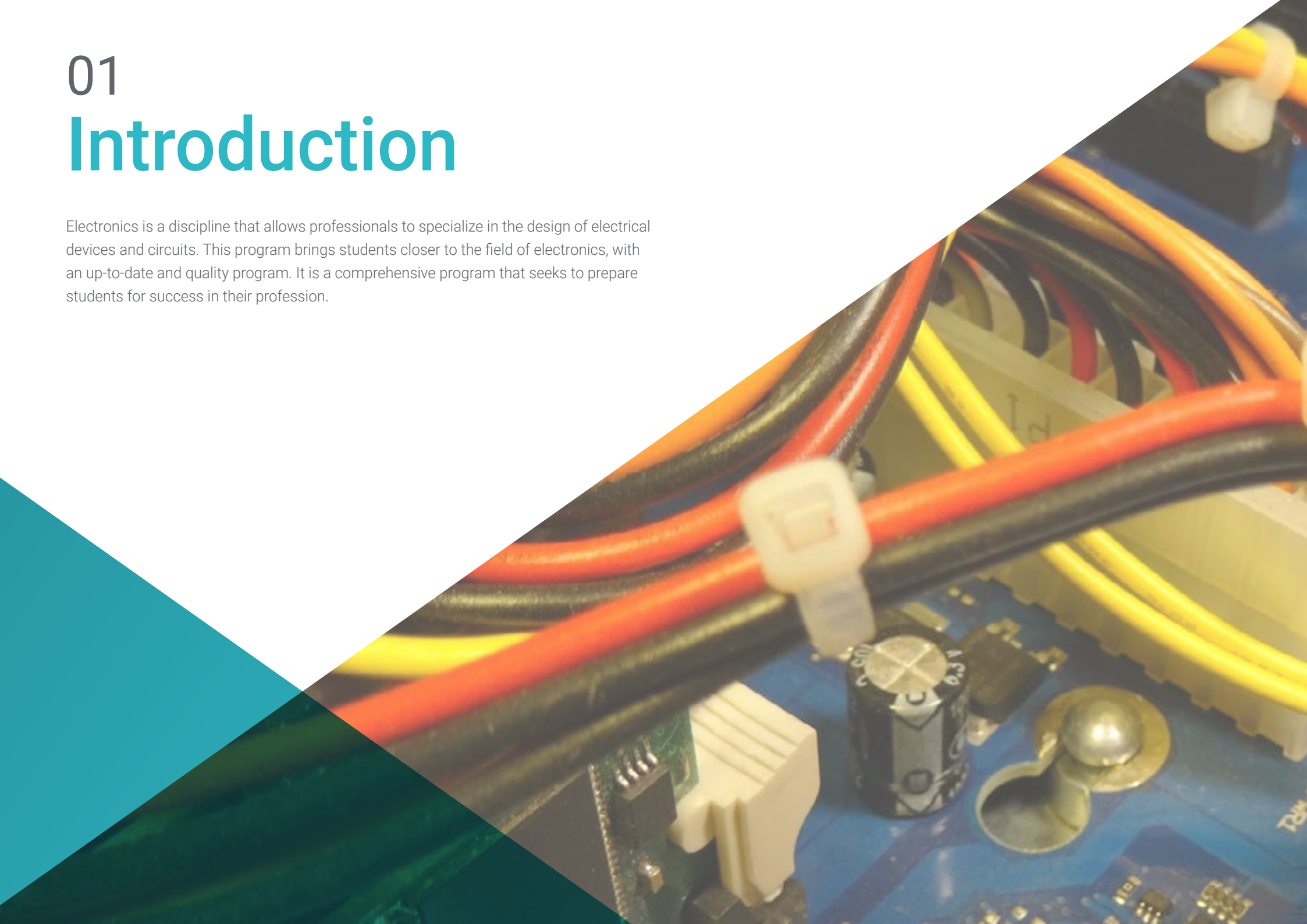
01

Introduction

Electronics is a discipline that allows professionals to specialize in the design of electrical devices and circuits. This program brings students closer to the field of electronics, with an up-to-date and quality program. It is a comprehensive program 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 Electronics 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 Electronics. 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.

In addition, as it is a 100% online Postgraduate Diploma, the student is 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 Electronics** contains the most complete and up-to-date educational program on the market. The most important features include:

- The development of practical cases presented by Electronics 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 Electronics Therapy
- 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 Electronics 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 Electronics"

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 train.

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 and experienced experts in hormone therapy.

02

Objectives

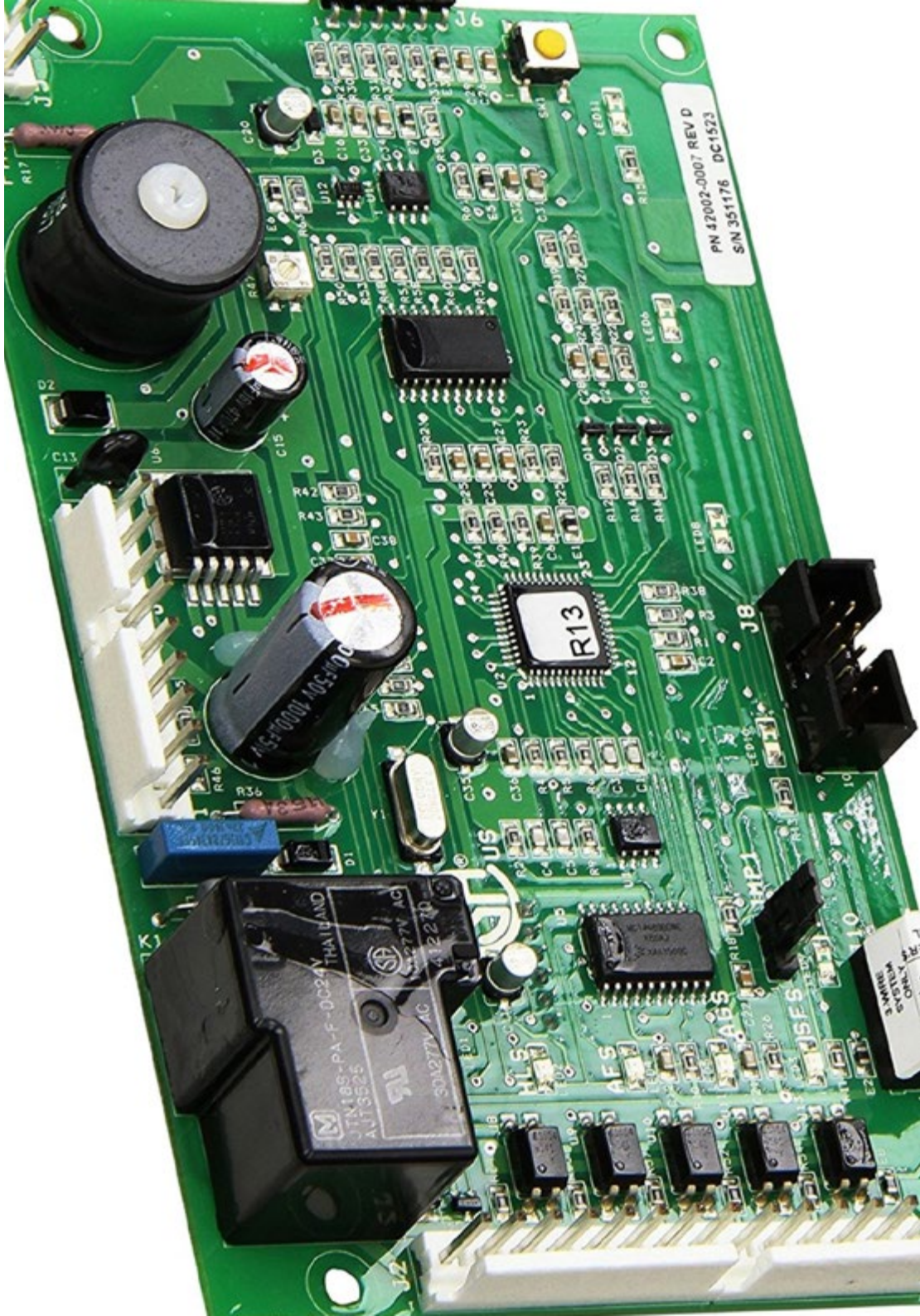
This Postgraduate Diploma in Electronics is designed to facilitate professional performance in the field to acquire knowledge of the main developments in the sector.

Our goal is to make you the best professional in your sector. And 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 telecommunications

Specialize in the world's leading private Spanish-speaking online university"



Specific Objectives

Module 1. Circuit Analysis

- Know the nature and behavior of electrical circuits
- Master basic concepts
- Identify circuit components
- Understand and apply the different analysis methods
- Master the fundamental theorems of circuit theory
- Develop calculation skills

Module 2. Electronics and Basic Instrumentation

- Learn about the operation and limitations of basic electronic workstation instruments
- Know and implement the basic techniques for measuring electrical parameters of signals, and evaluate the associated errors and their possible correction techniques
- Master the basic characteristics and behavior of the most common passive components and be able to select them for a given application
- Understand the basic characteristics of linear amplifiers
- Know, design and implement the basic circuits using operational amplifiers considered ideal
- Understand the operation of capacitively coupled multi-stage feedback-free amplifiers and be able to design them
- Analyze and know how to apply the basic techniques and configurations in analog integrated circuits

Module 3. Analog and Digital Electronics

- Know the basic concepts of digital and analog electronics
- Master the different logic gates and their characteristics
- Analyze and design digital circuits, both combinational and sequential
- Distinguish and evaluate the advantages and disadvantages between sequential, synchronous and asynchronous circuits, of using a clock signal
- Know integrated circuits and logic families
- Understand the different sources of energy, especially solar photovoltaic and solar thermal energy
- Obtain basic knowledge of electrical engineering, electrical distribution and power electronics

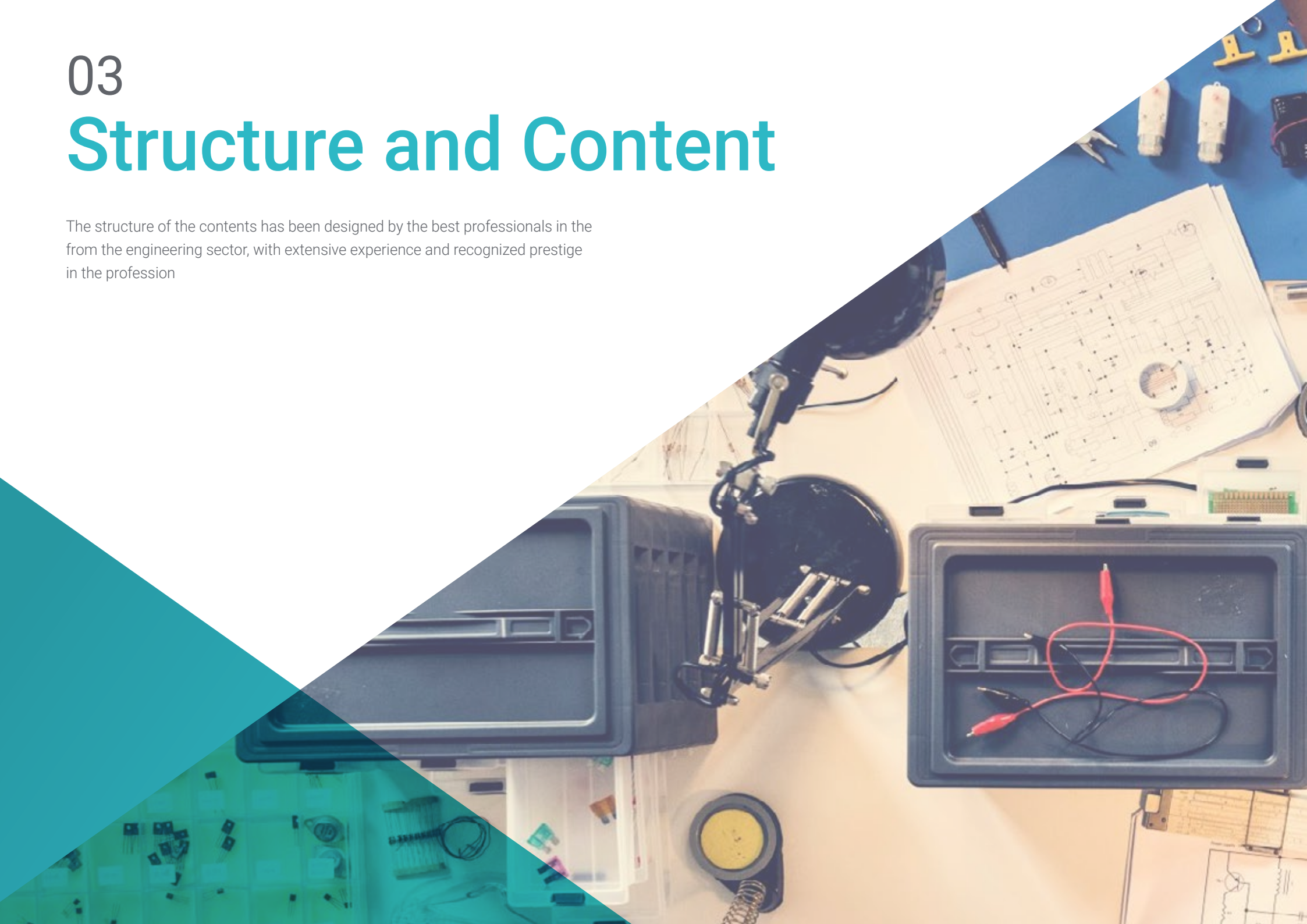
Module 4. Digital Systems

- Understand the structure and operation of microprocessors
- Know how to use the instruction set and machine language
- Be able to use hardware description languages
- Know the basic characteristics of microcontrollers
- Analyze the differences between microprocessors and microcontrollers
- Master the basic features of advanced digital systems

03

Structure and Content

The structure of the contents has been designed by the best professionals in the from the engineering sector, 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. Circuit Analysis

1.1. Basic Concepts of Circuits
- 1.1.1. Basic Components of Circuits
- 1.1.2. Nodes, Branches and Meshes
- 1.1.3. Resistance
- 1.1.4. Capacitors
- 1.1.5. Coils

1.2. Circuit Analysis Methods
- 1.2.1. Kirchoff's Laws. Law of Currents: Nodal Analysis
- 1.2.2. Kirchoff's Laws. Law of Tensions: Mesh Analysis
- 1.2.3. Superposition Theorem
- 1.2.4. Other Theorems of Interest

1.3. Sinusoidal Functions and Phasors
- 1.3.1. Review of Sinusoidal Functions and their Characteristics
- 1.3.2. Sinusoidal Functions as Circuit Excitation
- 1.3.3. Phasor Definition
- 1.3.4. Basic Phasor Operations

1.4. Analysis of Sinusoidal Steady-State Circuits. Effects of Passive Components Excited by Sinusoidal Functions
- 1.4.1. Impedance and Admittance of Passive Components
- 1.4.2. Sinusoidal Current and Voltage in Resistors
- 1.4.3. Sinusoidal Current and Voltage in Capacitors
- 1.4.4. Sinusoidal Current and Voltage in Coils

1.5. Sinusoidal Steady-State Power
- 1.5.1. Definitions
- 1.5.2. Effective Values
- 1.5.3. Example 1 of Power Calculation
- 1.5.4. Example 2 of Power Calculation

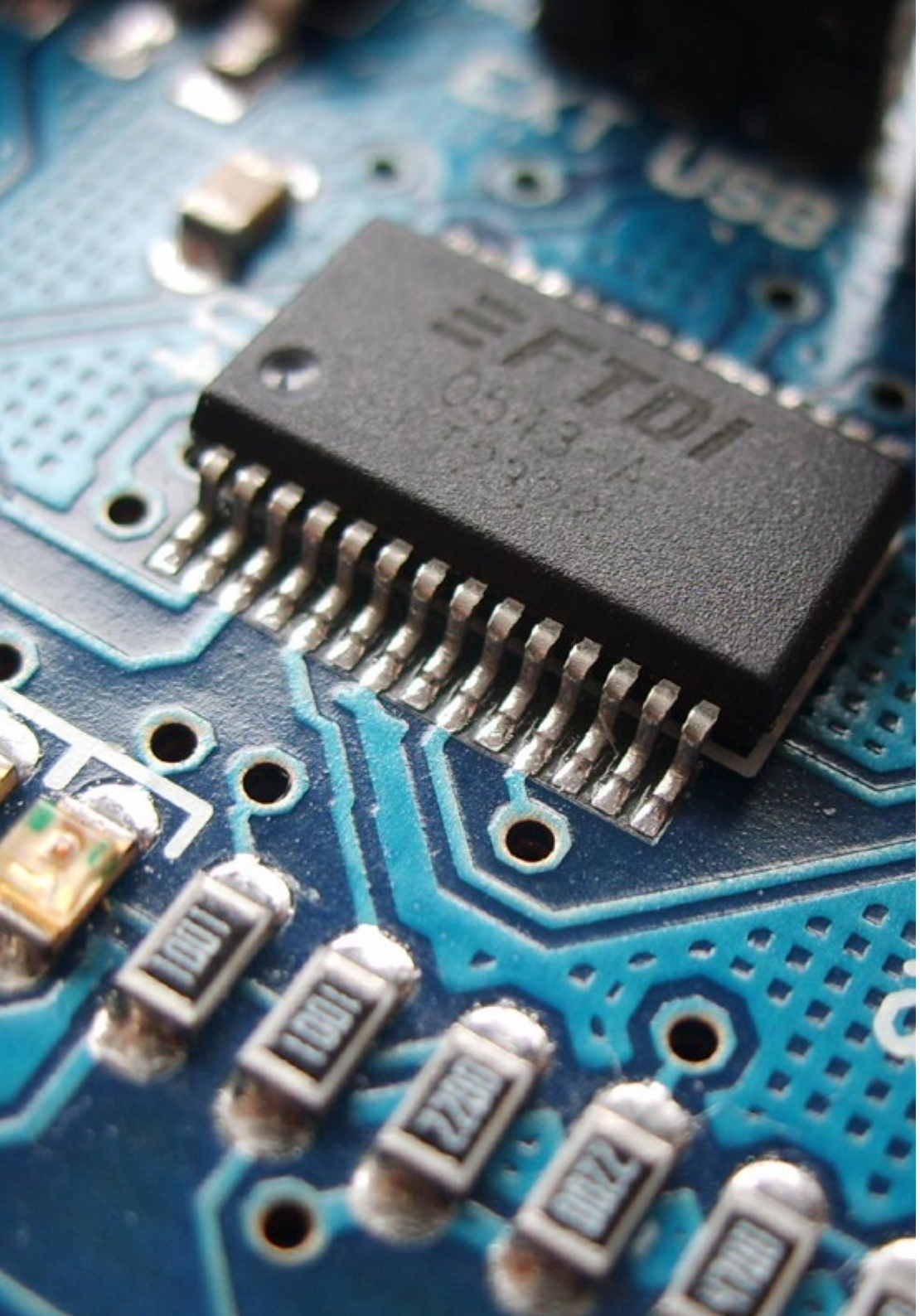
1.6. Generators
- 1.6.1. Ideal Generators
- 1.6.2. Real Generators
- 1.6.3. Associations of Generators in Series Assembly
- 1.6.4. Associations of Generators in Mixed Assembly

1.7. Topological Circuit Analysis
- 1.7.1. Equivalent Circuits
- 1.7.2. Thévenin's Equivalent
- 1.7.3. Continuous Steady-State of Thévenin's Equivalent
- 1.7.4. Norton Equivalent

1.8. Fundamental Circuit Theorems
- 1.8.1. Superposition Theorem
- 1.8.2. Maximum Power Transfer Theorem
- 1.8.3. Substitution Theorem
- 1.8.4. Millman Theorem
- 1.8.5. Reciprocity Theorem

1.9. Transformers and Coupled Circuits
- 1.9.1. Introduction
- 1.9.2. Iron Core Transformers: The Ideal Model
- 1.9.3. Excessive Impedance
- 1.9.4. Power Transformer Specifications
- 1.9.5. Transformer Applications
- 1.9.6. Practical Iron-Core Transformers
- 1.9.7. Transformer Testing
- 1.9.8. Voltage and Frequency Effects
- 1.9.9. Weakly Coupled Circuits
- 1.9.10. Magnetically Coupled Circuits with Sinusoidal Excitation
- 1.9.11. Coupled Impedance

1.10. Transient Phenomena Analysis in Circuits
- 1.10.1. Calculation of Instantaneous Current and Voltage in Passive Components
- 1.10.2. One Order Circuits in Transient Regime
- 1.10.3. Second Order Circuits in Transient Regime
- 1.10.4. Resonance and Frequency Effects: Filtering



Module 2. Basic Electronics and Instrumentation

2.1. Basic Instrumentation
- 2.1.1. Introduction. Signals and Their Parameters
- 2.1.2. Basic Electrical Quantities and their Measurement
- 2.1.3. Oscilloscopes
- 2.1.4. Digital Multimeter
- 2.1.5. Function Generator
- 2.1.6. Laboratory Power Supply

2.2. Electronic Components in the Laboratory
- 2.2.1. Main Types, Tolerance and Serial Concepts
- 2.2.2. Thermal Behavior and Power Dissipation. Maximum Voltage and Current
- 2.2.3. Concepts of Coefficients of Variation, Drift and Non-Linearity
- 2.2.4. Most Common Main Type Specific Parameters Catalog Selection and Limitations

2.3. The Junction Diode, Circuits with Diodes, Diodes for Special Applications
- 2.3.1. Introduction and Operation
- 2.3.2. Diode Circuits
- 2.3.3. Special Application Diodes
- 2.3.4. Zener Diode

2.4. The Bipolar Junction Transistor (BJT) and FET/MOSFET
- 2.4.1. Transistor Fundamentals
- 2.4.2. Polarization and Transistor Stabilization
- 2.4.3. Transistor Circuits and Applications
- 2.4.4. Single-Stage Amplifiers
- 2.4.5. Amplifier Types, Voltage, Current
- 2.4.6. Alternating Models

2.5. Basic Amplifier Concepts. Ideal Operational Amplifier Circuits
- 2.5.1. Types of Amplifiers. Voltage, Current, Transimpedance and Transconductance
- 2.5.2. Characteristic Parameters: Input and Output Impedances, Forward and Inverse Transfer Functions
- 2.5.3. Vision as Quadripoles and Parameters
- 2.5.4. Amplifier Association: Cascade, Series-Series, Series-Parallel, Parallel-Series and Parallel, Parallel
- 2.5.5. Operational Amplifier Concept. General Characteristics. Use as a Comparator and as an Amplifier
- 2.5.6. Inverting and Non-Inverting Amplifier Circuits. Precision Trackers and Rectifiers. Voltage Current Control
- 2.5.7. Elements for Instrumentation and Operational Calculation: Adders, Subtractors, Differential Amplifiers, Integrators and Differentiators
- 2.5.8. Stability and Feedback: Astables and Triggers

2.6. Single-Stage Amplifiers and Multistage Amplifiers
- 2.6.1. General Concepts of Device Polarization
- 2.6.2. Basic Polarization Circuits and Techniques. Implementation for Bipolar and Field Effect Transistors. Stability, Drift and Sensitivity
- 2.6.3. Basic Small-Signal Amplification Configurations: Common Emitter-Source, Base-Gate, Collector-Drainer. Properties and Variants
- 2.6.4. Performance Against Large Signal Excursions and Dynamic Range
- 2.6.5. Basic Analog Switches and their Properties
- 2.6.6. Frequency Effects in Single-Stage Configurations: Case of Medium Frequencies and their Limits.
- 2.6.7. Multi-Stage Amplification with R-C and Direct Coupling. Amplification, Frequency Range, Polarization and Dynamic Range Considerations

2.7. Basic Configurations in Analog Integrated Circuits
- 2.7.1. Differential Input Configurations. Bartlett's Theorem. Polarization, Parameters and Measurements
- 2.7.2. Polarization Functional Blocks: Current Mirrors and their Modifications. Active Loads and Level Changers
- 2.7.3. Standard Input Configurations and their Properties: Single Transistor, Darlington Pairs and their Modifications, Cascode
- 2.7.4. Output Configurations

2.8. Active Filters
- 2.8.1. General Aspects
- 2.8.2. Operational Filter Design
- 2.8.3. Low Pass Filters
- 2.8.4. High Pass Filters
- 2.8.5. Band Pass and Band Filters
- 2.8.6. Other Types of Active Filters

2.9. Analog-to-Digital Converters (A/D)
- 2.9.1. Introduction and Functionalities
- 2.9.2. Instrumental Systems
- 2.9.3. Types of Converters
- 2.9.4. Converter Characteristics
- 2.9.5. Data Processing

2.10. Sensors
- 2.10.1. Primary Sensors
- 2.10.2. Resistive Sensors
- 2.10.3. Capacitive Sensors
- 2.10.4. Inductive and Electromagnetic Sensors
- 2.10.5. Digital Sensors
- 2.10.6. Signal-Generating Sensors
- 2.10.7. Other Types of Sensors

Module 3. Analog and Digital Electronics

3.1. Introduction: Digital Concepts and Parameters
- 3.1.1. Analog and Digital Quantities
- 3.1.2. Binary Digits, Logic Levels and Digital Waveforms
- 3.1.3. Basic Logical Operations
- 3.1.4. Integrated Circuits
- 3.1.5. Programmable Logic Introduction
- 3.1.6. Measuring Tools
- 3.1.7. Decimal, Binary, Octal, Hexadecimal, BCD numbers
- 3.1.8. Arithmetic Operations with Numbers
- 3.1.9. Error Detection and Correction Codes
- 3.1.10. Alphanumeric Codes

3.2. Logic Gates
- 3.2.1. Introduction
- 3.2.2. The Investor
- 3.2.3. The AND Gate
- 3.2.4. The OR Gate
- 3.2.5. The NAND Gate
- 3.2.6. The NOR Gate
- 3.2.7. Exclusive OR and NOR Gate
- 3.2.8. Programmable Logic
- 3.2.9. Fixed Function Logic

3.3. Boolean Algebra
- 3.3.1. Boolean Operations and Expressions
- 3.3.2. Laws and Rules of Boolean Algebra
- 3.3.3. De Morgan's Theorems
- 3.3.4. Boolean Analysis of Logic Circuits
- 3.3.5. Simplification Using Boolean Algebra
- 3.3.6. Standard Forms of Boolean Expressions
- 3.3.7. Boolean Expressions and Truth Tables
- 3.3.8. Karnaugh Maps
- 3.3.9. Minimization of a Sum of Products and Minimization of a Product of Sums

3.4. Basic Combinational Circuits
- 3.4.1. Basic Circuits
- 3.4.2. Combinational Logic Implementation
- 3.4.3. Universal Properties of NAND and NOR Gates
- 3.4.4. Combinational Logic with NAND and NOR Gates
- 3.4.5. Logic Circuit Operation with Pulse Trains
- 3.4.6. Adders
  - 3.4.6.1. Basic Adders
  - 3.4.6.2. Parallel Binary Adders
  - 3.4.6.3. Carrying Adders
- 3.4.7. Comparators
- 3.4.8. Decodifiers
- 3.4.9. Coders
- 3.4.10. Code Converters
- 3.4.11. Multiplexors
- 3.4.12. Demultiplexers
- 3.4.13. Applications

3.5. Latches, Flip-Flops and Timers
- 3.5.1. Basic Concepts
- 3.5.2. Latches
- 3.5.3. Flank-Fired Flip-Flops
- 3.5.4. Flip-Flops Performance Characteristics
  - 3.5.4.1. Type D
  - 3.5.4.2. Type J-K
- 3.5.5. Monostable
- 3.5.6. Astables
- 3.5.7. The 555 Timer
- 3.5.8. Applications

3.6. Counters and Shift Registers
- 3.6.1. Asynchronous Meter Operation
- 3.6.2. Synchronous Meter Operation
  - 3.6.2.1. Ascendant
  - 3.6.2.2. Descendant
- 3.6.3. Synchronous Meter Design
- 3.6.4. Cascade Meters
- 3.6.5. Meter Decoding
- 3.6.6. Meter Application
- 3.6.7. Basic Functions of Shift Registers
  - 3.6.7.1. Displacement Registers with Serial Input and Parallel Output
  - 3.6.7.2. Shift Registers with Parallel Input and Serial Output
  - 3.6.7.3. Displacement Registers with Input and Parallel Output
  - 3.6.7.4. Bi-Directional Shift Registers
- 3.6.8. Counters Based on Shift Registers
- 3.6.9. Counter Register Applications

3.7. Memories, Introduction to SW and Programmable Logic
- 3.7.1. Semiconductor Memory Principles
- 3.7.2. RAM Memories
- 3.7.3. ROM Memories
  - 3.7.3.1. Read-Only
  - 3.7.3.2. PROM
  - 3.7.3.3. EPROM
- 3.7.4. Flash Memory
- 3.7.5. Memory Expansion
- 3.7.6. Special Memory Types
  - 3.7.6.1. FIFO
  - 3.7.6.2. LIFO
- 3.7.7. Optical and Magnetic Memories
- 3.7.8. Programmable Logic: SPLD and CPLD
- 3.7.9. Macrocells
- 3.7.10. Programmable Logic: FPGA
- 3.7.11. Programmable Logic Software
- 3.7.12. Applications

3.8. Analog Electronics: Oscillators
- 3.8.1. Theory of Oscillators
- 3.8.2. Wien Bridge Oscillator
- 3.8.3. Other RC Oscillators
- 3.8.4. Colpitts Oscillator
- 3.8.5. Other LC Oscillators
- 3.8.6. Crystal Oscillator
- 3.8.7. Quartz Crystals
- 3.8.8. The 555 Timer
  - 3.8.8.1. Stable Operation
  - 3.8.8.2. Monostable Operation
  - 3.8.8.3. Circuits
- 3.8.9. BODE Diagrams
  - 3.8.9.1. Amplitude
  - 3.8.9.2. Phase
  - 3.8.9.3. Transfer Functions

3.9. Power Electronics: Thyristors, Thyristor Converters, Inverters
- 3.9.1. Introduction
- 3.9.2. Converter Concept
- 3.9.3. Types of Converters
- 3.9.4. Parameters to Characterize the Converters
  - 3.9.4.1. Periodic Signal
  - 3.9.4.2. Time Domain Representation
  - 3.9.4.3. Frequency Domain Representation
- 3.9.5. Power Semiconductors
  - 3.9.5.1. Ideal Elements
  - 3.9.5.2. Diodes
  - 3.9.5.3. Thyristors
  - 3.9.5.4. GTO (Gate Turn-off Thyristor)
  - 3.9.5.5. BJT (Bipolar Junction Transistor)
  - 3.9.5.6. MOSFET
  - 3.9.5.7. IGBT (Insulated Gate Bipolar Transistor)

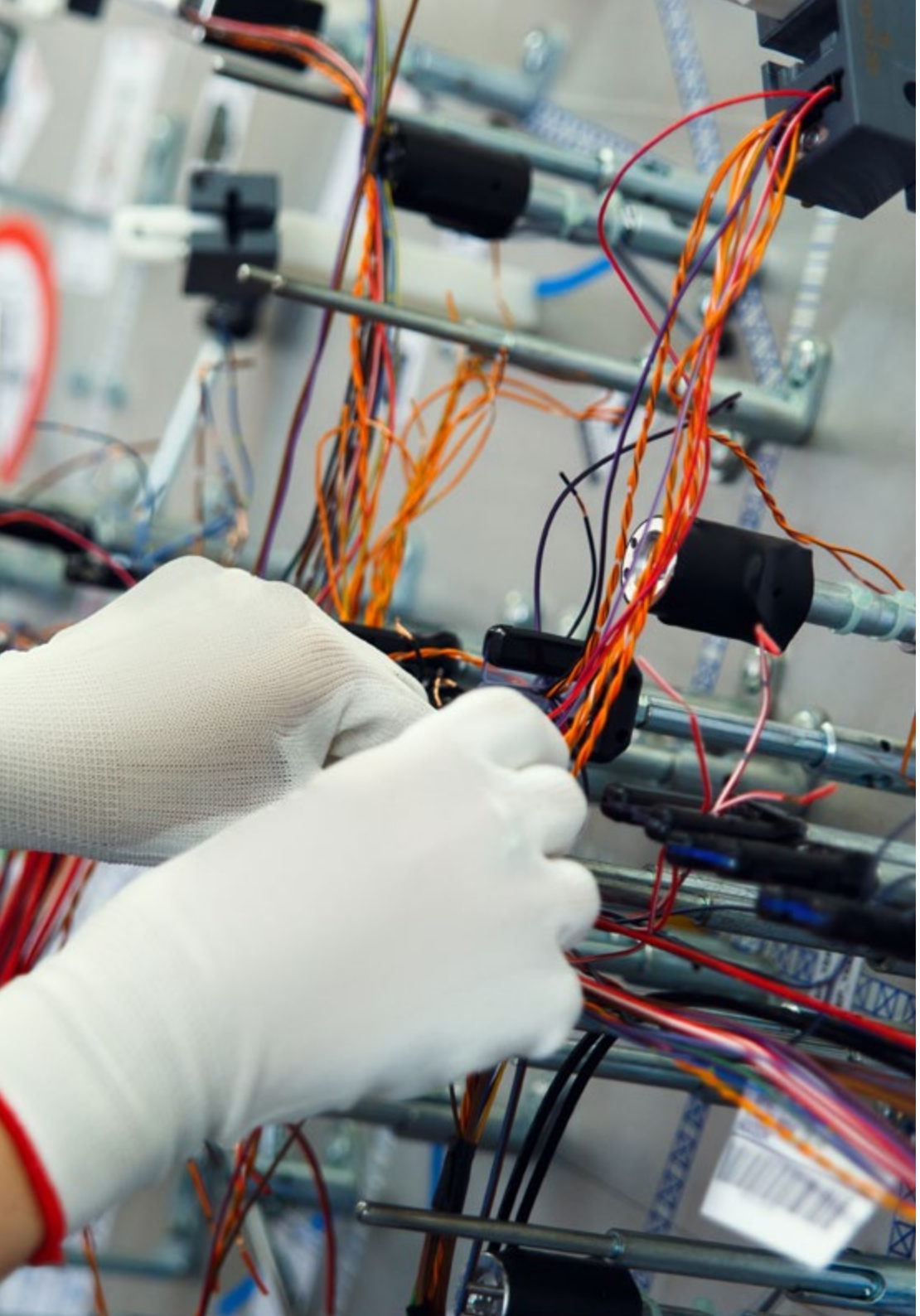
3.9.6. AC/DC Converters. Rectifiers
3.9.6.1. Quadrant Concept
3.9.6.2. Uncontrolled Rectifiers
3.9.6.2.1. Single Half-Wave Bridge
3.9.6.2.2. Full-Wave Bridge
3.9.6.3.Controlled Rectifiers
3.9.6.3.1. Single Half-Wave Bridge
3.9.6.3.2. Full-Wave Controlled Bridge
3.9.6.4. AC/DC Converters
3.9.6.4.1. DC/DC Converter Reducer
3.9.6.4.2. DC/DC Converter Booster
3.9.6.5. DC/AC Converters. Inverters
3.9.6.5.1. Square-Wave Inverter
3.9.6.5.2. PWM Inverter
3.9.6.6. AC/AC Converters. Cycloconverters
3.9.6.6.1. All/Nothing Control
3.9.6.6.2. Phase Control

3.10. Electric Power Generation, Photovoltaic Installation. Legislation
3.10.1. Components of Solar Photovoltaic Systems
3.10.2. Solar Energy Introduction
3.10.3. Classification of Solar Photovoltaic Systems
3.10.3.1. Autonomous Applications
3.10.3.2. Networked Applications
3.10.4. ISF Elements
3.10.4.1. Solar Cell: Basic Characteristics
3.10.4.2. Solar Panels
3.10.4.3. Regulators
3.10.4.4. Accumulators. Types of Cells
3.10.4.5. The Investor
3.10.5. Networked Applications
3.10.5.1. Introduction
3.10.5.2. Elements of Grid-Connected Solar Photovoltaic Systems
3.10.5.3. Design and Calculation of Grid-Connected Photovoltaic Systems
3.10.5.4. Solar Farm Design
3.10.5.5. Building-Integrated System Design
3.10.5.6. Installation Interaction with Electrical Networks
3.10.5.7. Analysis of Possible Disturbances and Quality of Supply
3.10.5.8. Electricity Consumption Measurements
3.10.5.9. System Safety and Protection
3.10.5.10. Current Regulations
3.10.6. Renewable Energy Legislation

Module 4. Digital Systems

4.1. Basic Concepts and Functional Organization of Computers
4.1.1. Basic Concepts
4.1.2. Functional Structure of Computers
4.1.3. Machine Language Concept
4.1.4. Basic Parameters for Computer Performance Characterization
4.1.5. Conceptual Levels of Computer Description
4.1.6. Conclusions
4.2. Representation of Machine-Level Information
4.2.1. Introduction
4.2.2. Text Representation
4.2.2.1. ASCII Code (American Standard Code for Information Interchange)
4.2.2.2. Unicode
4.2.3. Sound Representation
4.2.4. Image Representation
4.2.4.1. Bitmaps
4.2.4.2. Vector Maps
4.2.5. Video Representation

4.2.6. Numerical Data Representation
4.2.6.1. Integer Representation
4.2.6.2. Real Number Representation
4.2.6.2.1. Rounding
4.2.6.2.2. Special Situations
4.2.7. Conclusions
4.3. Computer Operation Diagram
4.3.1. Introduction
4.3.2. Processor Internals
4.3.3. Sequencing the Inner Workings of Computers
4.3.4. Management of Control Instructions
4.3.4.1. Management of Jump Instructions
4.3.4.2. Handling of Subroutine Calls and Return Instructions
4.3.5. Interruptions
4.3.6. Conclusions
4.4. Description of a Computer at the Machine and Assembler Language Level
4.4.1. Introduction: RISC vs CISC Processors
4.4.2. RISC Processors: CODE-2
4.4.2.1. CODE-2 Characteristics
4.4.2.2. CODE-2 Machine Language Description
4.4.2.3. Methodology for the Execution of CODE-2 Machine Language Programs
4.4.2.4. CODE-2 Assembly Language Description
4.4.3. A CISC Family: 32-Bit Intel Processors (IA-32)
4.4.3.1. Evolution of the Intel Processor Family
4.4.3.2. Basic Structure of the 80×86 Processor Family
4.4.3.3. Syntax, Instruction Format and Operand Types
4.4.3.4. Basic Repertoire of the 80×86 Processor Family
4.4.3.5. Assembler Directives and Memory Location Reservation
4.4.4. Conclusions
4.5. Processor Organization and Design
4.5.1. Introduction to CODE-2 Processor Design
4.5.2. Control Signals from the CODE-2 Processor
4.5.3. Data Processing Unit Design
4.5.4. Control Unit Design
4.5.4.1. Wired and Micro-Programmed Control Units
4.5.4.2. CODE-2 Control Unit Cycle
4.5.4.3. CODE-2 Control Unit Design
4.5.5. Conclusions
4.6. Inputs and Outputs: Buses
4.6.1. Input/Output Organization
4.6.1.1. Input/Output Controllers
4.6.1.2. Input/Output Port Addressing
4.6.1.3. I/O Transfer Techniques
4.6.2. Basic Interconnection Structures
4.6.3. Buses
4.6.4. PC Internal Structure
4.7. Microcontrollers and PICs
4.7.1. Introduction
4.7.2. Basic Characteristics of Microcontrollers
4.7.3. Basic Characteristics of PICs
4.7.4. Differences between Microcontrollers, PICs and Microprocessors
4.8. A/D Converters and Sensors
4.8.1. Signal Sampling and Reconstruction
4.8.2. A/D Converters
4.8.3. Sensors and Transducers
4.8.4. Basic Digital Signal Processing
4.8.5. Basic Circuits and Systems for A/D Conversion



4.9. Microcontroller System Programming
- 4.9.1. System Design and Electronic Configuration
- 4.9.2. Configuration of a Micro-controlled Digital Systems Development Environment using Free Tools.
- 4.9.3. Description of the Language Used by the Microcontroller.
- 4.9.4. Programming Microcontroller Functions
- 4.9.5. Final System Assembly

4.10. Advanced Digital Systems: FPGAs and DSPs
- 4.10.1. Description of Other Advanced Digital Systems
- 4.10.2. Basic FPGA Characteristics
- 4.10.3. Basic DSP Characteristics
- 4.10.4. Hardware Description Languages

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

04

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 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

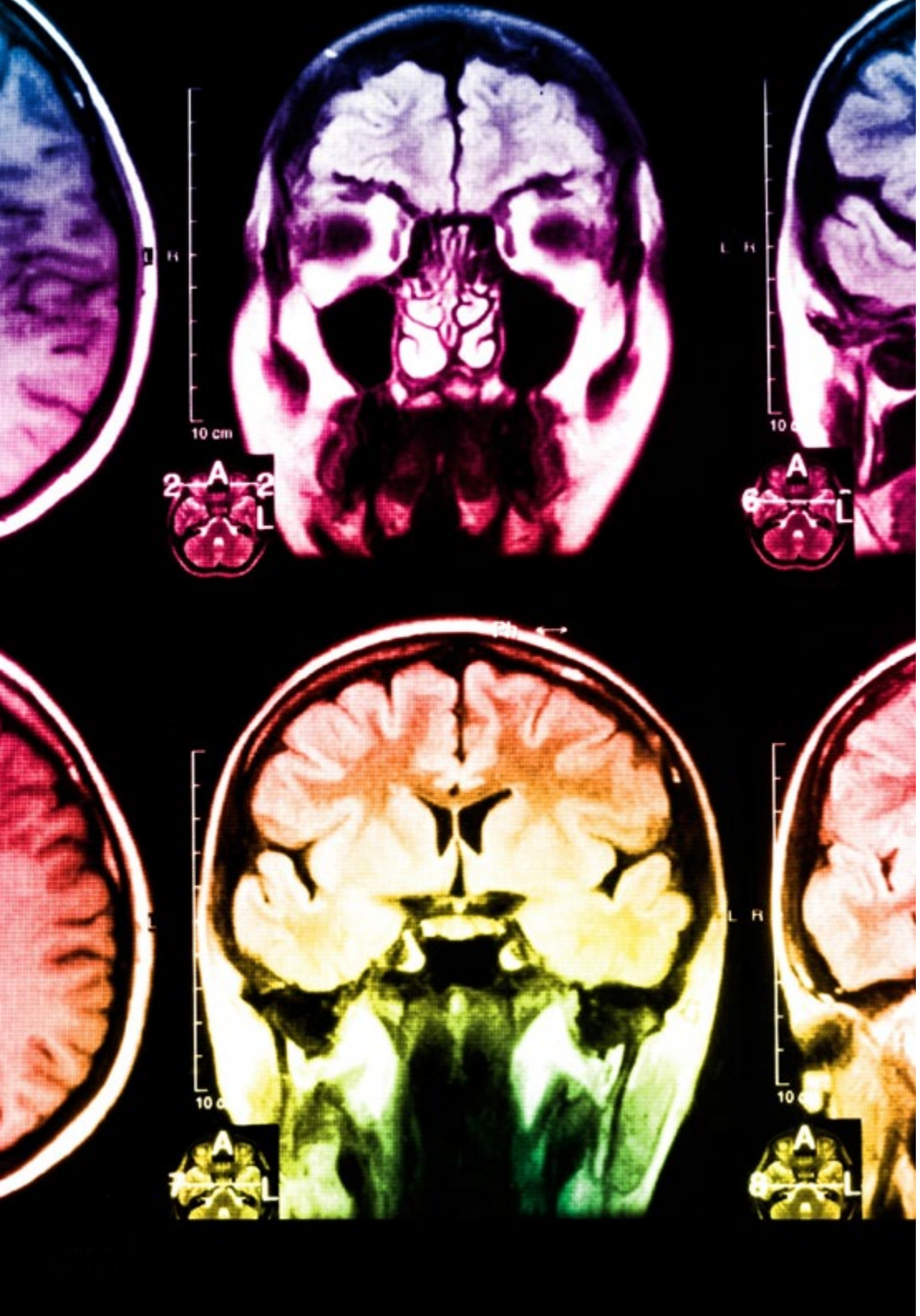
TECH effectively combines the Case Study methodology with a 100% online learning system based on repetition, which combines different teaching elements in each lesson.

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.

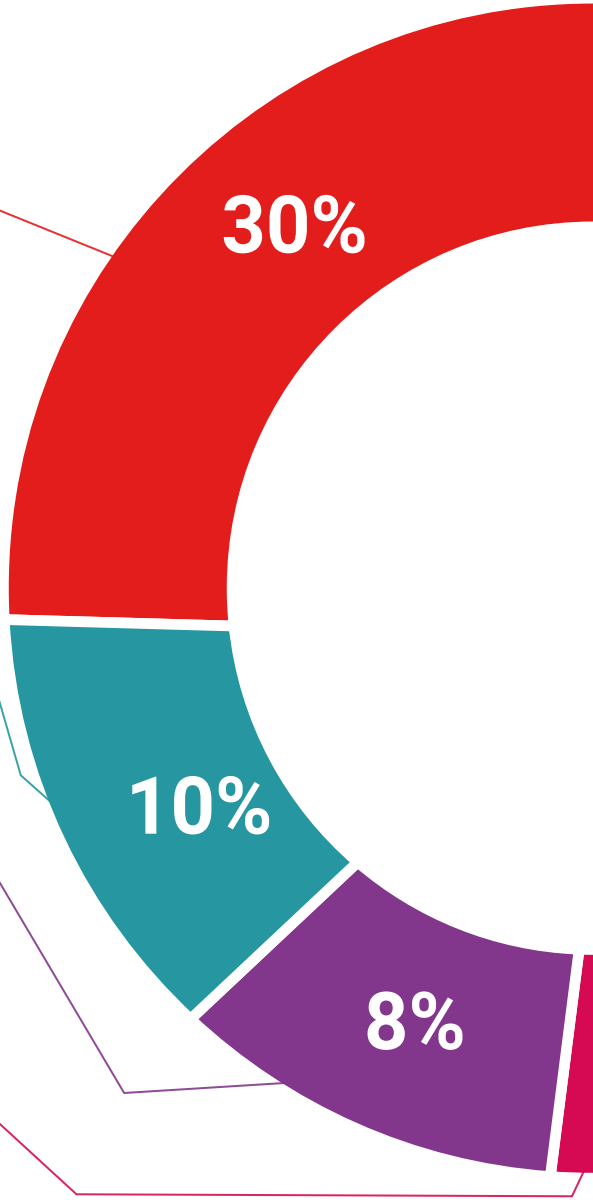
Learning from an Expert strengthens knowledge and memory, and generates confidence in future difficult decisions.

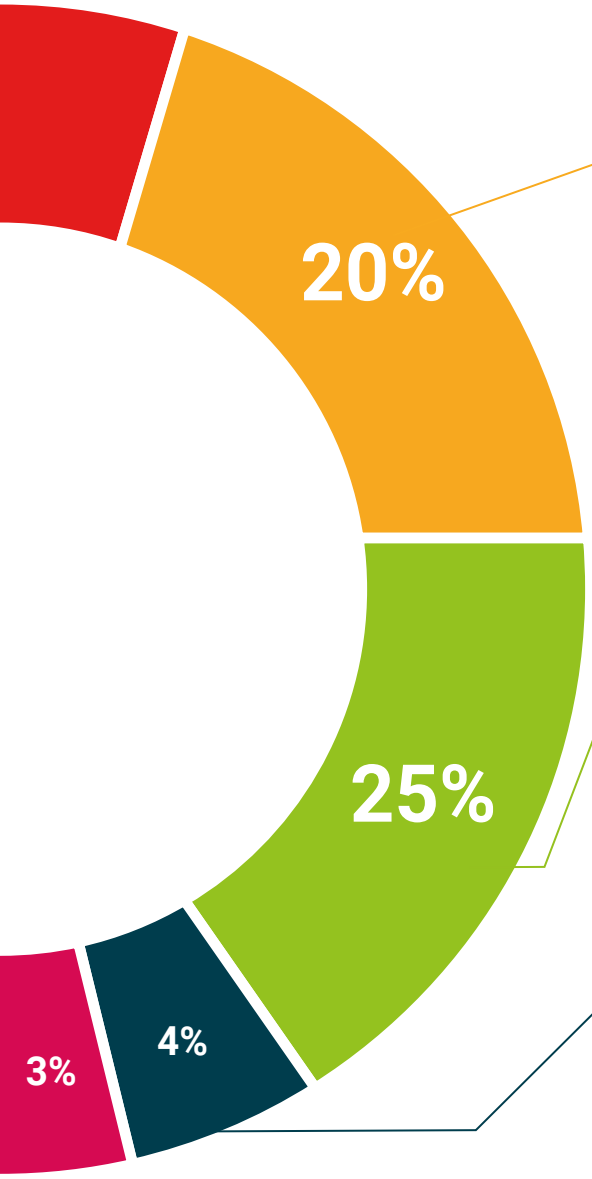
Practising Skills and Abilities

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

This Postgraduate Diploma in Electronics guarantees students, in addition to the most rigorous and up-to-date education, access to a Postgraduate Diploma issued by TECH Technological University.

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

This **Postgraduate Diploma in Electronics** contains the most complete and up-to-date educational program on the market.

After the student has passed the evaluations, they will receive their corresponding **Postgraduate Diploma** issued by **TECH Technological University** via tracked delivery*.

The certificate issued by **TECH Technological University** will reflect the qualification obtained in the Postgraduate Diploma, and meets the requirements commonly required by labor exchanges, competitive examinations, and professional career evaluation committees.

Title: **Postgraduate Diploma in Electronics**

Official N° of Hours: **600 h.**


tech technological university

Awards the following

CERTIFICATE

to

Mr./Ms. _____, with identification number _____.

For having passed and accredited the following program

POSTGRADUATE DIPLOMA

in

Electronics

This is a qualification awarded by this University, equivalent to 600 hours, with a start date of dd/mm/yyyy and an end date of dd/mm/yyyy.

TECH is a Private Institution of Higher Education recognized by the Ministry of Public Education as of June 28, 2018.

June 17, 2020

Tere Guevara Navarro

Dean

Unique TECH Code: AFWORD23S techtitute.com/certificates

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

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Postgraduate Diploma
Electronics

- Modality: **online**
- Duration: **6 months**
- Certificate: **TECH Technological University**
- Dedication: **16h/week**
- Schedule: **at your own pace**
- Exams: **online**

Postgraduate Diploma
Electronics

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