Postgraduate Certificate
Internet of Things (IoT)

tech technological university

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Postgraduate Certificate
Internet of Things (IoT)

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

Website: **www.techtitute.com/pk/artificial-intelligence/postgraduate-certificate/internet-things-lot**

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01

Introduction

A report carried out by the National Observatory of Technology and Society reflects considerable progress in the digital transformation of companies. This has occurred due to the powerful Industry 4.0, which uses technological branches such as Artificial Intelligence or the Internet of Things to connect and exchange data with other devices through the network. In turn, this has a variety of applications in industries of various kinds. For example, the healthcare field employs these disciplines to monitor health through wearable devices, manage medications and even track patients' vital signs in real time.

In view of their importance, TECH is developing a pioneering online university program that will delve into these Intelligent Systems.

This Postgraduate Certificate, 100% online, will allow you to design the most innovative Cyber-Physical Systems to optimize the supply chains of any institution"

In the context of the Internet of Things, one of the main concerns of experts lies in the security of intelligent systems. The protection of devices, networks and data is vital to prevent threats such as cyberattacks, denials of service or code injections. For this reason, it is crucial for professionals to stay on top of the latest trends occurring in this field of expertise. In this way, professionals will incorporate into their daily practice the most innovative strategies to ensure that their architectures are totally immune to third-party attacks.

In order to facilitate this update, TECH has created a Postgraduate Certificate in Internet of Things. Designed by references in this field, the curriculum will address the Security Systems implementation platforms, taking into account factors such as their components and typologies. Likewise, the syllabus will provide students with the most modern tactics to implement protection on IoT platforms. This will allow graduates to implement authentication and data encryption procedures in their devices, in order to protect the confidentiality and integrity of transmitted information. On the other hand, the program will delve into the operation of Digital Twins, virtual digital representations of real objects that will enable students to perform simulations, analysis or tests without affecting real-world physical systems.

To consolidate these contents, TECH offers a 100% online modality and provides students with high quality materials. This methodology, combined with the application of the Relearning approach developed by TECH, will ensure that professionals acquire knowledge more efficiently and with better results, thus minimizing their effort. , The only thing they will need is a device with Internet access to nurture their Daily praxis and experience a remarkable leap in their career path.

This **Postgraduate Certificate in Internet of Things (IoT)** contains the most complete and up-to-date program on the market. The most important features include:

- The examination of practical cases presented by experts in Things (IoT Internet)
- The graphic, schematic, and practical contents with which they are created, provide practical information on the disciplines that are essential for professional practice
- Practical exercises where the self-assessment process can be carried out to improve learning
- 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

Are you looking to update your knowledge at your own pace and without external constraints, such as travel to academic centers? The Relearning system of this program will give you the flexibility you need"

You will handle the Digital Twins effectively and create accurate digital models of physical objects to evaluate their performance"

You will master the main platforms for Geolocation, thus performing real-time tracking of assets such as vehicles.

The program will incorporate real case studies and exercises that will bring the development of the program closer to your usual professional practice. You will enjoy an immersive learning experience!

The program's teaching staff includes professionals from the sector who contribute their work experience to this program, as well as renowned specialists from leading societies and prestigious universities.

The multimedia content, developed with the latest educational technology, will provide the professional with situated and contextual learning, i.e., a simulated environment that will provide 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 For this purpose, the students will be assisted by an innovative interactive video system created by renowned and experienced experts.

02

Objectives

This Postgraduate Certificate will provide graduates with a solid understanding of the Internet of Things field. In this way, they will skillfully handle technologies such as sensors, cloud computing or actuators. Professionals will acquire technical skills to design, develop, implement and manage the most innovative Cyber-Physical Systems. Moreover, they will be highly aware of the challenges associated with the implementation of these mechanisms, (security, privacy, interoperability, etc.) and will have a wide range of cutting-edge resources to address them successfully. In addition, the experts will stand out for their innovative vision and identify new business opportunities in this area.

You will achieve your professional goals thanks to this program, which provides you with the most cutting-edge knowledge of the Internet of Things so that you can incorporate it with immediacy into your daily practice"

General Objectives

- Conduct a comprehensive analysis of the profound transformation and radical paradigm shift being experienced in the current global digitalization process
- Provide in-depth knowledge and the necessary technological tools to face and lead the technological leap and the challenges currently present in companies.
- Mastering the digitalization procedures of companies and the automation of their processes to create new fields of wealth in areas such as creativity, innovation and technological efficiency
- Leading Digital Change

Want to become the top IoT Engineer in your professional environment? Get it with this course in just 6 weeks"

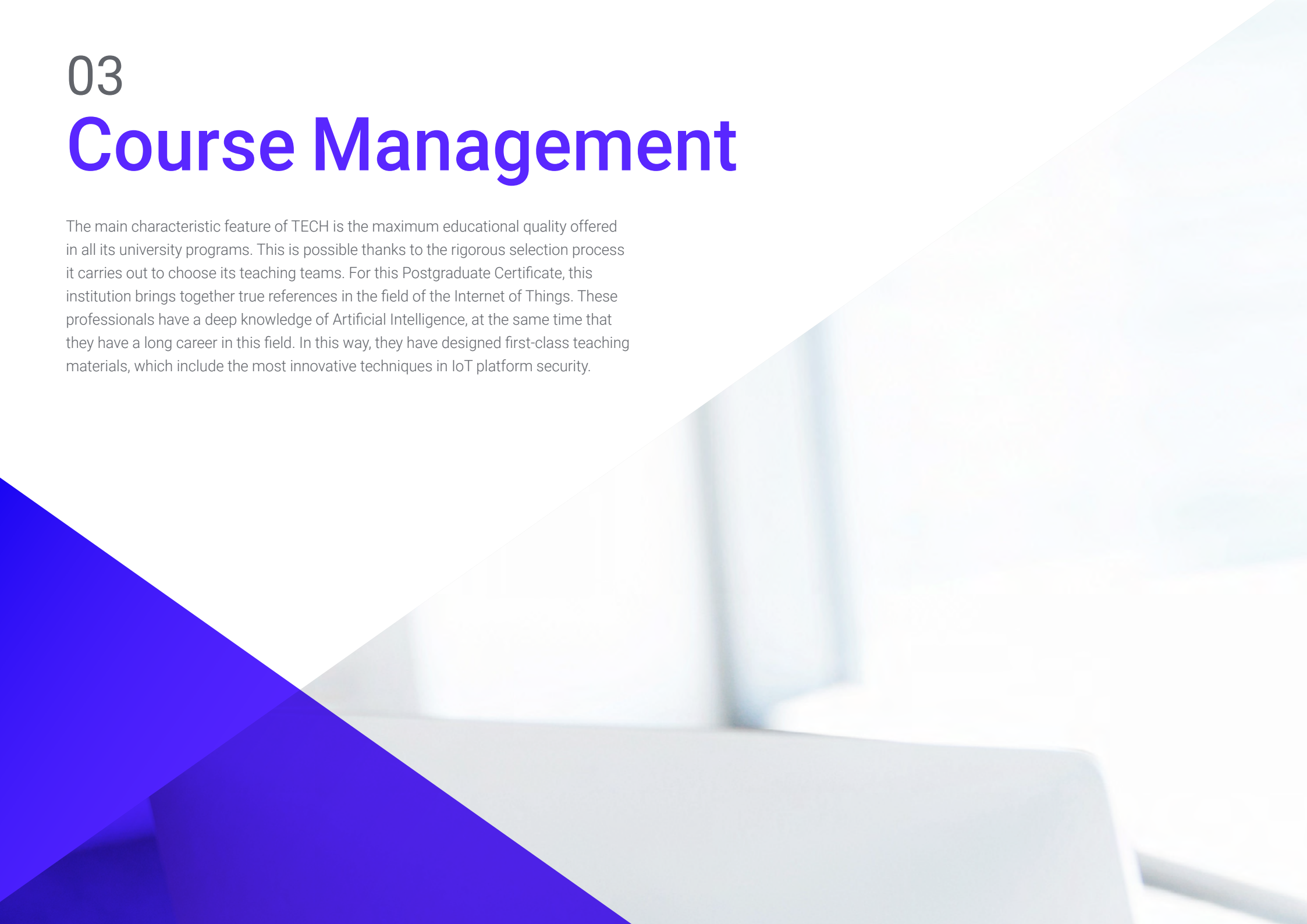
Specific Objectives

- Know in detail the functioning of IoT and Industry 4.0 and its combinations with other technologies, its current situation, its main devices and uses and how hyperconnectivity gives rise to new business models where all products and systems are connected and in permanent communication
- Deepen the knowledge of an IoT platform and the elements that compose it, the challenges and opportunities to implement IoT platforms in factories and companies, the main business areas related to IoT platforms and the relationship between IoT platforms, robotics and other emerging technologies
- Know the main existing wearable devices, their usefulness, the security systems to be applied in any IoT model and its variant in the industrial world, called IoT
- Be aware of the security and privacy challenges associated with IoT, as well as best practices or solutions to mitigate those risks

03

Course Management

The main characteristic feature of TECH is the maximum educational quality offered in all its university programs. This is possible thanks to the rigorous selection process it carries out to choose its teaching teams. For this Postgraduate Certificate, this institution brings together true references in the field of the Internet of Things. These professionals have a deep knowledge of Artificial Intelligence, at the same time that they have a long career in this field. In this way, they have designed first-class teaching materials, which include the most innovative techniques in IoT platform security.



A teaching team made up of Internet of Things professionals will guide you through the entire academic itinerary, guaranteeing effective learning"

Management

Dr. Segovia Escobar, Pablo

- Chief Executive of the Defense Sector in the Company Tecnobit of the Oesía Group
- Corporate Project Director Indra
- Master's Degree in Companies Administration and Management by the National University of Distance Education.
- Postgraduate in Strategic Management Function
- Member of: Spanish Association of People with High Intellectual Quotient

Professors

Mr. Diezma López, Pedro

- Chief Innovation Officer and CEO of Zerintia Technologies
- Founder of the technology company Acuilae
- Member of the Kebala Group for business incubation and promotion.
- Consultant for technology companies such as Endesa, Airbus or Telefónica
- Wearable "Best Initiative" Award in eHealth 2017 and "Best Technological "Solution" 2018 for occupational safety

Take the opportunity to learn about the latest advances in this field in order to apply it to your daily practice"

04

Structure and Content

This university program will provide graduates with a holistic approach to the Internet of Things, one of the most important branches of Artificial Intelligence The curriculum will delve into the handling of the different Cyber-Physical Systems, delving into their components and applications. The syllabus will also provide students with the most advanced platforms to carry out both Indoor and Outdoor geolocation. In this way, professionals will overcome challenges such as data integration or scalability. Likewise, the program will thoroughly explore Intelligent Security Systems, allowing students to protect their connected devices against cyber threats.

A high-level syllabus that covers, in just 150 hours, the latest advances in systems to implement API integrations"

Module 1. Internet of Things (IoT)

1.1. Cyber-Physical Systems (CPS) in the Industry 4.0 Vision
- 1.1.1. Internet of Things (IoT)
- 1.1.2. Components Involved in IoT
- 1.1.3. Cases and Applications of IoT

1.2. Internet of Things and Cyber-Physical Systems
- 1.2.1. Computing and Communication Capabilities to Physical Objects
- 1.2.2. Sensors, Data and Elements in Cyber-Physical Systems

1.3. Device Ecosystem
- 1.3.1. Typologies, Examples and Uses
- 1.3.2. Applications of the Different Devices

1.4. IoT Platforms and their Architecture
- 1.4.1. IoT Market Typologies and Platforms
- 1.4.2. Operation of an IoT Platform

1.5. Digital Twins
- 1.5.1. Digital Twin
- 1.5.2. Uses and Applications the Digital Twin

1.6. Indoor & outdoor Geolocation (Real Time Geospatial)
- 1.6.1. Indoor and Outdoor Geolocation Platforms
- 1.6.2. Implications and Challenges of Geolocation in an IoT Project

1.7. Security Intelligence Systems
- 1.7.1. Typologies and Platforms for Security Systems Implementation
- 1.7.2. Components and Architectures in Intelligent Safety Systems

1.8. IoT and IIoT Platform Security
- 1.8.1. Security Components in an IoT System
- 1.8.2. IoT Security Implementation Strategies

1.9. Wearables at Work
  1.9.1. Types of Wearables in Industrial Environments
  1.9.2. Lessons Learned and Challenges in Implementing Wearables in the Workplace
1.10. Implementing an API to Interact with a Platform
  1.10.1. Types of APIs Involved in an IoT Platform
  1.10.2. API Market
  1.10.3. Strategies and Systems to Implement API Integrations

TECH offers you a complete virtual library that includes multimedia resources, so that you can reinforce your knowledge in a dynamic way. Enroll now!"

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 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

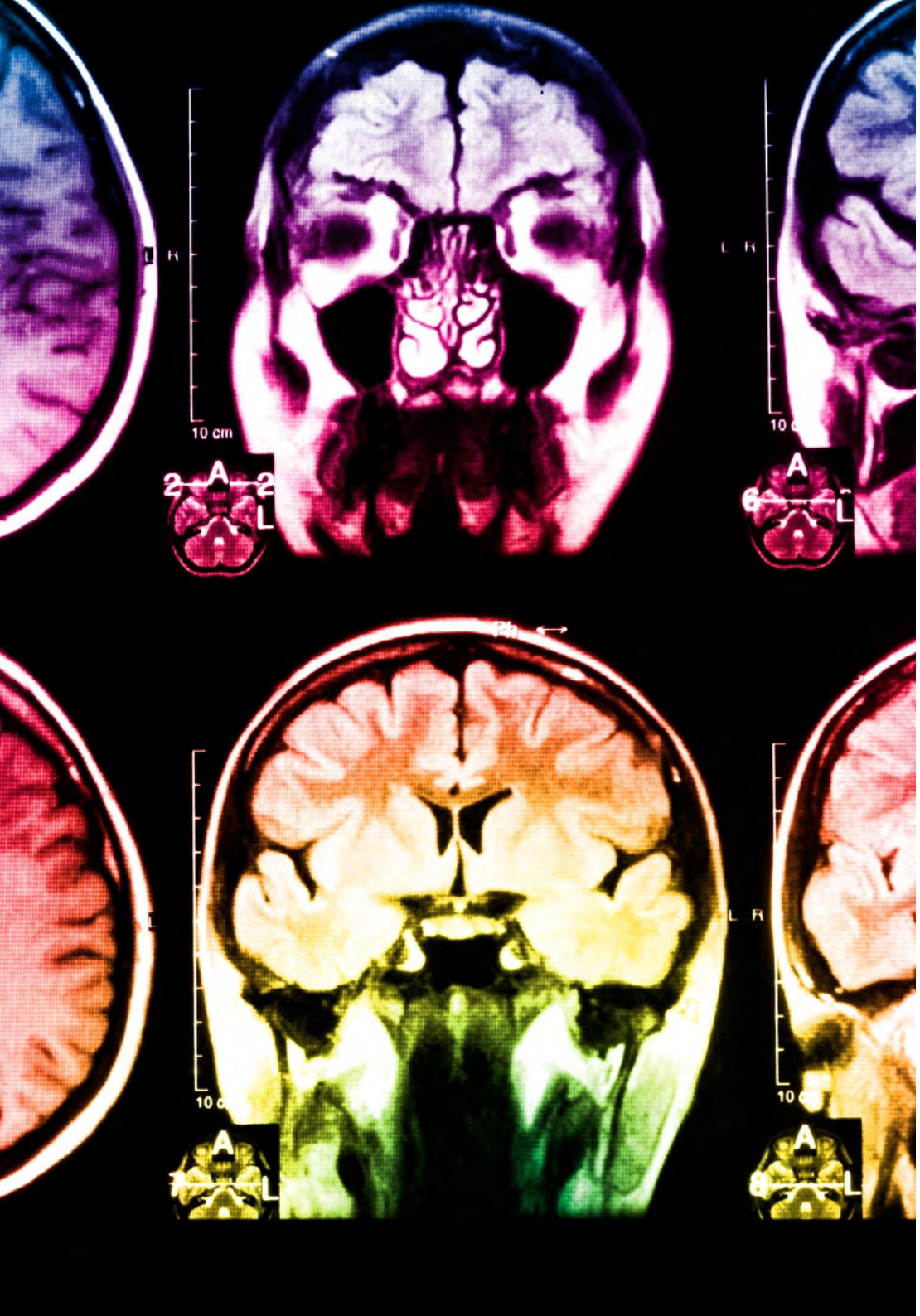
TECH effectively combines the Case Study methodology with a 100% online learning system based on repetition, which combines different teaching elements in each lesson.

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.

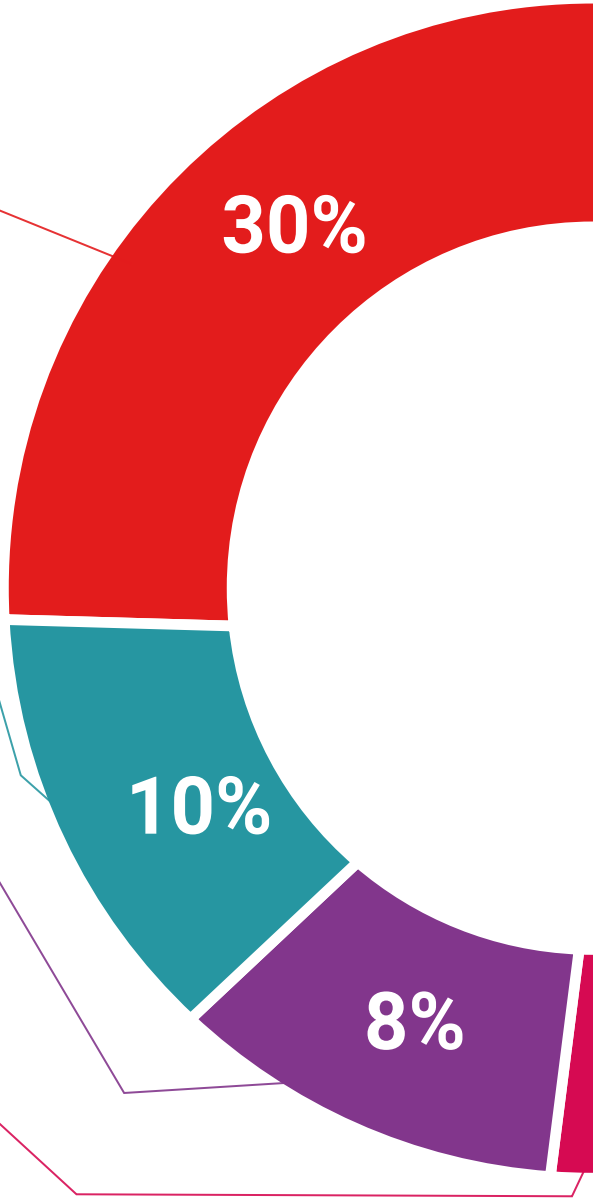
Learning from an Expert strengthens knowledge and memory, and generates confidence in future difficult decisions.

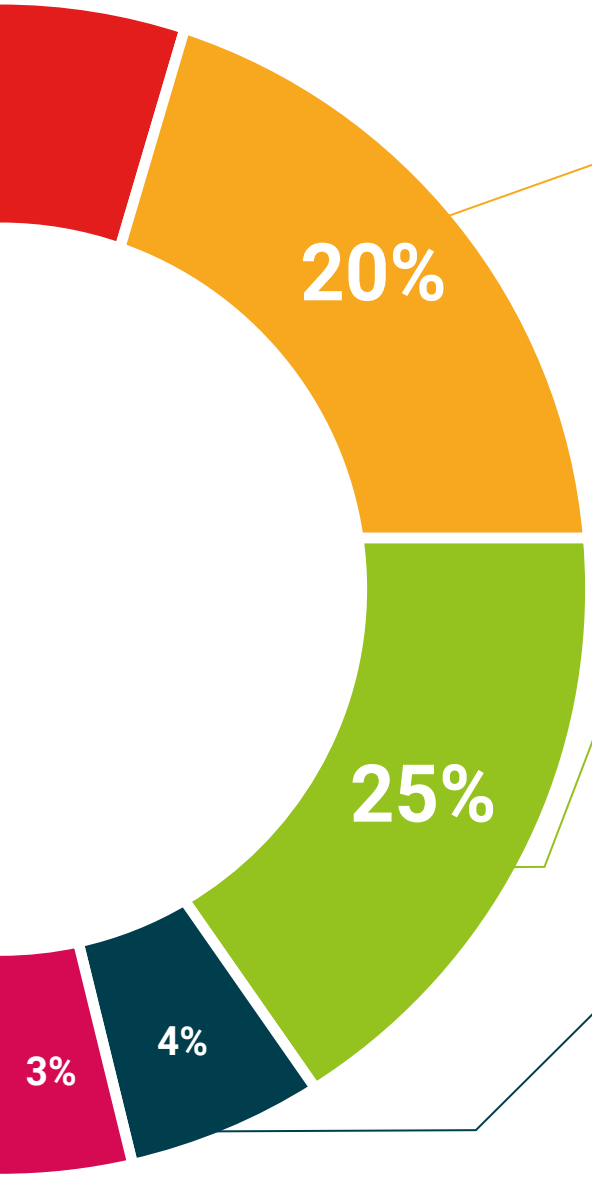
Practising Skills and Abilities

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.

06

Certificate

The Postgraduate Certificate in Internet of Things guarantees students, in addition to the most rigorous and up-to-date education, access to a Postgraduate Certificate issued by TECH Global University.

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

This **Postgraduate Certificate in Internet of Things (IoT)** contains the most complete and up-to-date program on the market.

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

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

Title: **Postgraduate Certificate in Internet of Things (IoT)**

Official Nº of Hours: **150 h.**


tech technological university

Awards the following

DIPLOMA

to

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

For having passed and accredited the following program

POSTGRADUATE CERTIFICATE

in

Internet of Things (IoT)

This is a qualification awarded by this University, equivalent to 150 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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