Postgraduate Certificate
Internet of Things (IoT)

tech *technological university*

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**

- » Target Group: **Engineers, architects and graduates who want to learn and update themselves on the latest technological trends and digitalization processes that will help them lead technological innovation and business transformation. It is also highly recommended for innovation managers who want to create value within their area and organizations, relying on the emerging technologies of Industry 4.0, knowing them and making an intelligent selection and application of them to meet customer expectations·**

Website: **www.techtitute.com/in/school-of-business/postgraduate-certificate/internet-things-iot**

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01

Welcome

The Internet of Things represents an intensive change in terms of interconnectivity that takes a giant step forward in digitization in many sectors. This change offers new opportunities for access to data, specific services in education, security, healthcare or transportation, among others. It has been called the Fourth Industrial Revolution and has changed the way many processes and their professionals work. As a result, the industry is oriented towards the incorporation of intelligent projects and the use of their multiple advantages in production processes. This program is a high quality opportunity to upgrade your skills and advance to an expert position in this sector.

If you want to improve, make a positive change at a professional level and network with the best, then this is the place for you.

We are waiting for you.

Postgraduate Certificate in Internet of Things (IoT).
TECH Technological University

> *A complete study of the Internet of Things that offers the professional the specific knowledge of the processes that lead companies to position themselves within the so-called Fourth Industrial Revolution"*

02
Why Study at TECH?

TECH is the world's largest 100% online business school. It is an elite business school, with a model based on the highest academic standards. A world-class center for intensive managerial skills education.

tech

" *TECH is a university at the forefront of technology, and puts all its resources at the student's disposal to help them achieve entrepreneurial success"*

At TECH Technological University

Innovation

The university offers an online learning model that balances the latest educational technology with the most rigorous teaching methods. A unique method with the highest international recognition that will provide students with the keys to develop in a rapidly-evolving world, where innovation must be every entrepreneur's focus.

"Microsoft Europe Success Story", for integrating the innovative, interactive multi-video system.

The Highest Standards

Admissions criteria at TECH are not economic. Students don't need to make a large investment to study at this university. However, in order to obtain a qualification from TECH, the student's intelligence and ability will be tested to their limits. The institution's academic standards are exceptionally high...

95% of TECH students successfully complete their studies

Networking

Professionals from countries all over the world attend TECH, allowing students to establish a large network of contacts that may prove useful to them in the future.

+100000 executives prepared each year

+200 different nationalities

Empowerment

Students will grow hand in hand with the best companies and highly regarded and influential professionals. TECH has developed strategic partnerships and a valuable network of contacts with major economic players in 7 continents.

+500 collaborative agreements with leading companies

Talent

This program is a unique initiative to allow students to showcase their talent in the business world. An opportunity that will allow them to voice their concerns and share their business vision.

After completing this program, TECH helps students show the world their talent.

Multicultural Context

While studying at TECH, students will enjoy a unique experience. Study in a multicultural context. In a program with a global vision, through which students can learn about the operating methods in different parts of the world, and gather the latest information that best adapts to their business idea.

TECH students represent more than 200 different nationalities.

TECH strives for excellence and, to this end, boasts a series of characteristics that make this university unique:

Learn with the best

In the classroom, TECH's teaching staff discuss how they have achieved success in their companies, working in a real, lively, and dynamic context. Teachers who are fully committed to offering a quality specialization that will allow students to advance in their career and stand out in the business world.

Teachers representing 20 different nationalities.

At TECH, you will have access to the most rigorous and up-to-date case analyses in academia"

Analysis

TECH explores the student's critical side, their ability to question things, their problem-solving skills, as well as their interpersonal skills.

Academic Excellence

TECH offers students the best online learning methodology. The university combines the Relearning methodology (the most internationally recognized postgraduate learning methodology) with Harvard Business School case studies. A complex balance of traditional and state-of-the-art methods, within the most demanding academic framework.

Economy of Scale

TECH is the world's largest online university. It currently boasts a portfolio of more than 10,000 university postgraduate programs. And in today's new economy, volume + technology = a ground-breaking price. This way, TECH ensures that studying is not as expensive for students as it would be at another university.

Why Our Program?

Studying this TECH program means increasing the chances of achieving professional success in senior business management.

It is a challenge that demands effort and dedication, but it opens the door to a promising future. Students will learn from the best teaching staff and with the most flexible and innovative educational methodology.

We have highly qualified teachers and the most complete syllabus on the market, which allows us to offer you education of the highest academic level"

This program will provide you with a multitude of professional and personal advantages, among which we highlight the following:

01

A Strong Boost to Your Career

By studying at TECH, students will be able to take control of their future and develop their full potential. By completing this program, students will acquire the skills required to make a positive change in their career in a short period of time.

70% of students achieve positive career development in less than 2 years.

02

Develop a strategic and global vision of the company

TECH offers an in-depth overview of general management to understand how each decision affects each of the company's different functional fields.

Our global vision of companies will improve your strategic vision.

03

Consolidate the student's senior management skills

Studying at TECH means opening the doors to a wide range of professional opportunities for students to position themselves as senior executives, with a broad vision of the international environment.

You will work on more than 100 real senior management cases.

04

You will take on new responsibilities

The program will cover the latest trends, advances and strategies, so that students can carry out their professional work in a changing environment.

45% of graduates are promoted internally.

05

Access to a powerful network of contacts

TECH connects its students to maximize opportunities. Students with the same concerns and desire to grow. Therefore, partnerships, customers or suppliers can be shared.

You will find a network of contacts that will be instrumental for professional development.

06

Thoroughly develop business projects

Students will acquire a deep strategic vision that will help them develop their own project, taking into account the different fields in companies.

20% of our students develop their own business idea.

07

Improve *soft skills* and management skills

TECH helps students apply and develop the knowledge they have acquired, while improving their interpersonal skills in order to become leaders who make a difference.

Improve your communication and leadership skills and enhance your career.

08

You will be part of an exclusive community

Students will be part of a community of elite executives, large companies, renowned institutions, and qualified teachers from the most prestigious universities in the world: the TECH Technological University community.

We give you the opportunity to study with a team of world-renowned teachers.

04

Objectives

The design of this Postgraduate Certificate in Internet of Thing (IoT) aims to lead the professional to acquire the theoretical and practical knowledge necessary to apply the functionalities of the Internet of Things in diverse and interesting industrial fields. An intensive learning experience that will enable students to master the main updates in the field, which will allow you to practice your profession with the highest quality and professionalism.

A drive of excellence for professional updating that will lead you to the mastery of the most updated and innovative contents in IoT"

Your goals are our goals.
We work together to help you achieve them
The **Postgraduate Certificate in Internet of Thing (IoT)** will qualify you to:

01 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

02 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

Smart Home

03 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 IIoT

04 Develop, from all available data, the Digital Twin of the facilities/systems/assets integrated in an IoT network.

Structure and Content

This exceptional Postgraduate Certificate is a tailor-made program that is delivered in a 100% online format to allow students to choose the time and place that best suits their availability, schedules and interests.

A program that aims to be a unique and stimulating experience that lays the foundation for success as a project manager.

The most complete syllabus.

With the most complete and updated syllabus in this field that will allow you to grow in your competences and competitiveness"

Syllabus

The Postgraduate Certificate in Internet of Things (IoT) of TECH - Technological University is an intensive program updated to the current market reality and the new needs in digitization and automation, crisis management and incorporation of new exponential and emerging technologies.

During the course, not only will the student delve into the theoretical study of the possibilities of the Internet of Things, but also real practices with different technologies will be carried out.

Throughout 150 hours of study, students will study a multitude of practical cases through individual work, which will allow them to acquire the necessary skills to successfully develop in their daily practice. It is, therefore, an authentic immersion in real business situations.

This program deals in depth with different areas of the company and is designed for managers to understand project management from a strategic, international and innovative perspective.

A plan designed especially for students, focused on their professional improvement and that prepares to achieve excellence in the field of leadership and business management. A program that understands your needs and those of your company through innovative content based on the latest trends, and supported by the best educational methodology and an exceptional faculty, which will provide you with the skills to solve critical situations in a creative and efficient way.

This is a program that takes 6 weeks and is distributed in 1 module:

Module 1	Internet of Things (IoT)

Where, when, and how it is taught

TECH offers you the possibility of taking this program completely online. Throughout the six weeks of training, you will be able to access all the program contents at any time, allowing you to self-manage your study time.

A unique, key, and decisive educational experience to boost your professional development and make the definitive leap.

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

A journey that will take you progressively and steadily towards acquiring the knowledge and skills you need in IoT"

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"

TECH Business School uses the 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"

This program prepares you to face business challenges in uncertain environments and achieve business success.

A learning method that is different and innovative

This TECH program is an intensive educational program, created from scratch to present executives with challenges and business decisions at the highest level, whether at the national or international level. 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 business reality is taken into account.

You will learn, through collaborative activities and real cases, how to solve complex situations in real business environments"

The case method has been the most widely used learning system among the world's leading business 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 we face in the case method, an action-oriented learning method. Throughout the program, the studies will be presented with multiple real cases. They must integrate all their knowledge, research, argue and defend their ideas and decisions.

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

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.

Our online system will allow you to organize your time and learning pace, adapting it to your schedule. You will be able to access the contents from any device with an internet connection.

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 online business school is the only one in the world licensed to incorporate 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.

01 learning from evidence

02 relearning from evidence

03 testing

04 learning from an expert

05 neurocognitive context dependent learning

06 Von-Restorff effect

07 case based learning through storytelling

08 competencies testing (retesting)

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. With this methodology we have 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, markets, and financial 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 specialization, developing a critical mindset, defending arguments, and contrasting opinions: a direct equation to 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.

Management Skills Exercises

They will carry out activities to develop specific executive competencies in each thematic area. Practices and dynamics to acquire and develop the skills and abilities that a high-level manager needs to develop in the context of the globalization we live in.

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.

30%

10%

8%

3%

30%

15%

4%

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 senior management 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.

Our Students' Profiles

This TECH program is aimed at professionals who want to update their knowledge in the technological area, discover new ways to innovate and advance in their professional career.

This program uses a multidisciplinary approach as the students have a diverse set of academic profiles and represent multiple nationalities.

Created for Industry professionals, this exceptional program will ensure the digital competence of the companies in which they intervene"
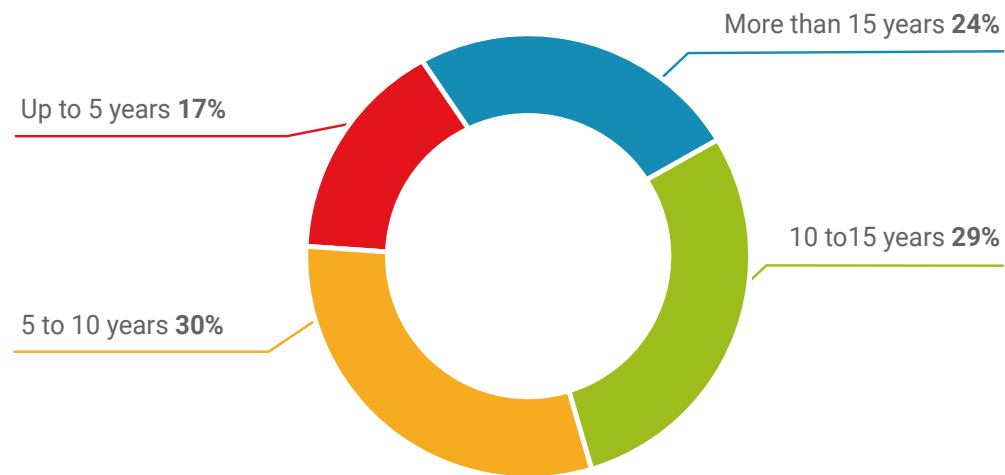
Average Age

Between **35** and **45** years old

Years of Experience

More than 15 years **24%**

Up to 5 years **17%**

10 to15 years **29%**

5 to 10 years **30%**

Training

Economics and Business **32%**

Design **15%**

Engineering **32%**

Social Sciences **8%**

Other **13%**

Educational Profile

Corporate Management **23%**

Project Manager **32%**

Entrepreneurs **20%**

Industry **15%**

Other **10%**
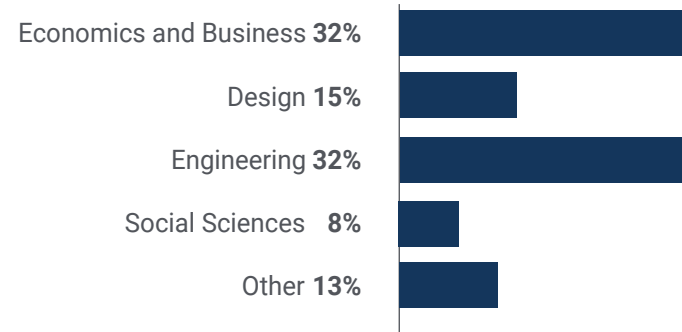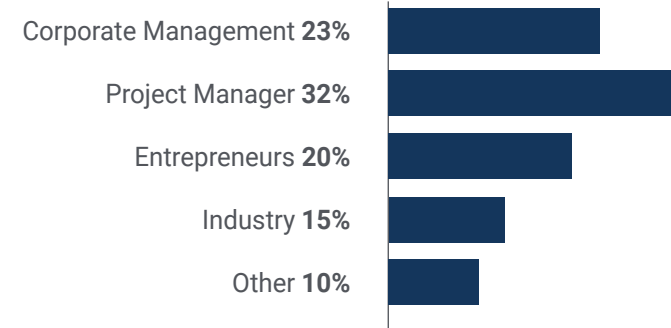
Geographical Distribution

Country	%
USA	9%
Spain	38%
Mexico	21%
Colombia	7%
Argentina	12%
Chile	5%
Peru	2%
Other	6%
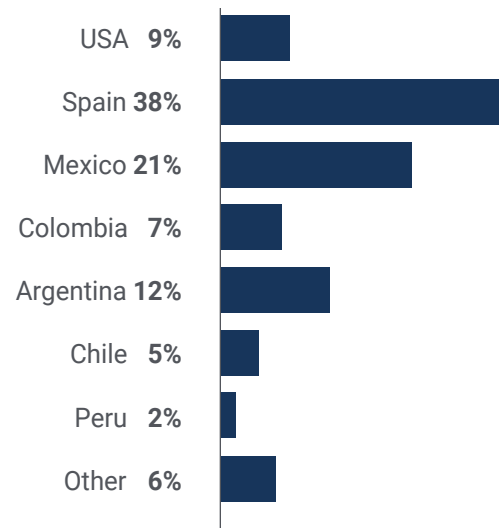
Lorena del Mar Salvado

Executive Manager

"This program has been the fastest and most effective way to get me up to speed on the Internet of Things. The quality has been as promised and I have been delighted with the teachers. All very good"

08

Course Management

The teachers, experts in the Internet of Things who are also proficient in online teaching, are one of the differential values of this program. Through their direct knowledge of this field of work, they will provide students with direct knowledge and practical aspects of this highly interesting intervention. In this way, TECH teachers have compiled the most updated information on this subject to offer it to their students in a faithful and didactic way.

This high-penetration IoT program will allow you to acquire the broadest and most immediate vision of the forms and processes of application in this field"

Management

Mr. Segovia Escobar, Pablo

- Industrial Engineer, Project Management Professional (PMP) por el Program Management Institute
- Master in Business Administration and Management
- Postgraduate in Strategic Management Function
- Sales Manager and Program Manager with extensive experience (more than 12 years) in project management
- He is currently commercial manager of the Aftermarket and Industry 4.0 area applied to the support of systems at Indra

Mr. Diezma López, Pedro

- Entrepreneur, writer, TEDx speaker and expert in emerging and exponential technologies
- Founder of the technology companies Acuilae (Artificial Intelligence), Ethyka and Zerintia Technologies
- Wearable "Best Initiative" Award in eHealth 2017 and "Best Technological "Solution" 2018 for occupational safety
- One of the world's leading experts (Source: Onalytica) in Wearable Technology and Internet of Things

Professors

Mr. González Cano, Jose Luis

- Industrial Electronics Technician

- Degree in Optics from the Complutense University of Madrid

- Focuses his independent professional activity collaborating with companies in the lighting sector in consulting, training, lighting technology projects and implementation of ISO 9001:2015 quality systems (internal auditor)

- Vocational teacher in electronics and automation

- Has directed and taught as a teacher of Vocational Training in electronic systems, telematics (CISCO certified instructor), radio communications, IoT

- Member of the Professional Association of Lighting Designers (Technical Consultant)

- Member of the Spanish Lighting Committee, participating in working groups on LED technology

A journey that will take you progressively and steadily towards acquiring the knowledge and skills you need in IoT"

09

Impact on Your Career

TECH-Universidad Technological University is aware that taking a program of these characteristics is a great economic, professional and, of course, personal investment for the student. The ultimate goal of this great effort should be to achieve professional growth. And this is achieved thanks to an academic program that offers the best educational offer of the moment in this sector. A program designed to support students at the educational level, so that they develop the necessary skills to successfully manage in this field.

TECH puts all of its academic resources at the disposal of its students so they acquire the necessary skills that will lead them to success"

Are you ready to take the leap?
Excellent professional development awaits you

The Postgraduate Certificate in Internet of Things (IoT) from TECH - Technological University is an intensive and highly valuable program aimed at improving students' job skills in an area of broad competence. Undoubtedly, it is a unique opportunity to improve professionally, but also personally, as it involves effort and dedication.

Those who wish to improve themselves, achieve a positive change at a professional level and interact with the best, will find their place at TECH.

Generating Positive Change

A program of high academic standing to lead your career to success.

This program will allow students to acquire the necessary competitiveness to make a radical change in their careers.

Time of Change

During the program	During the first year	After 2 years
25%	**40%**	**35%**

Type of Change

Internal Promotion **33%**

Change of Company **39%**

Entrepreneurship **28%**
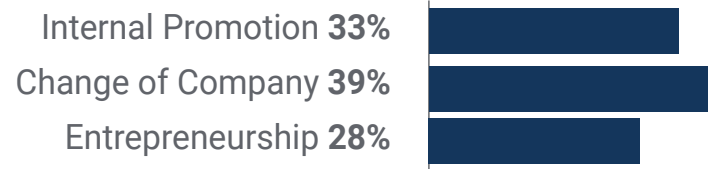
Salary Increase

This program represents a salary increase of more than **25.22%** for our students.

Salary before	A salary increase of	Salary after
$57,900	**25.22%**	**$75,500**

10
Benefits for Your Company

This program contributes to elevating the organization's talent to its maximum potential by training high-level leaders.

Participating in this program is a unique opportunity to access a powerful network of contacts in which to find future professional partners, customers or suppliers.

A high-value academic program that will make a difference in your professional practice"

Developing and retaining talent in companies is the best long-term investment.

01

Growth of talent and intellectual capital

The professional will introduce the company to new concepts, strategies, and perspectives that can bring about significant changes in the organization.

02

Retaining high-potential executives to avoid talent drain

This program strengthens the link between the company and the professional and opens new avenues for professional growth within the company.

03

Building agents of change

You will be able to make decisions in times of uncertainty and crisis, helping the organization overcome obstacles.

04

Increased international expansion possibilities

Thanks to this program, the company will come into contact with the main markets in the world economy.

05

Project Development

The professional can work on a real project or develop new projects in the field of R & D or business development of your company.

06

Increased competitiveness

This program will equip students with the skills to take on new challenges and drive the organization forward.

11
Certificate

The Postgraduate Certificate in Internet of Things (IoT) guarantees students, in addition to the most rigorous and up-to-date education, access to a Postgraduate Certificate 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 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 certificate 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 N° of hours: **150 h.**

tech technological university

Awards the following
CERTIFICATE
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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