Postgraduate Certificate
IoT Technologies Architecture

tech technological university

Postgraduate Certificate

IoT Technologies Architecture

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

Website: **www.techtitute.com/pk/information-technology/postgraduate-certificate/lot-technologies-architecture**

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01
Introduction

The Industrial Revolution of the 21st century is called the Internet of Things (IoT). The automation of processes and the exploitation of information seems more than inevitable in a hyperconnected world, and the trend is increasing. In the coming years, the number of connected devices is predicted to almost triple worldwide. From 8.74 billion in 2020 to more than 25.4 billion in 2030. These figures underscore the importance of this degree program. It includes content such as architectures and platforms for IoT solutions, Smart Things, sustainability applied to IoT or the challenges it presents. All this, through a 100% online modality and without timetables, which favors the student's independence and the assimilation of concepts.

*Throughout the course you will learn
to combine the IoT with other technological trends,
such as cloud computing or Machine Learning"*

The emergence of 5G and beyond will further facilitate the proliferation of IoT, the range of possibilities is enormous. For example, industrial environments where the use of IoT devices facilitates product manufacturing and shipment tracking. Or the healthcare sector, where the use of IoT is helping to detect diseases early.

The Postgraduate Certificate in IoT Technologies Architecture begins by defining the concept, comparing it with other relevant technological trends and considering the different architectures and platforms involved.

It then delves into Smartbuildings and Smartcities, two concepts that seem futuristic but are a reality in certain parts of the world. It also includes a sustainable perspective. On the other hand, use cases will be presented use cases in different sectors will be presented in order to understand the IoT concept in a practical way.

Finally, the part of the IoT most closely linked to the labor market will be analyzed. With an overview of the business ecosystem, a study of the role of the engineer and an explanation of the challenges facing the IoT, organized by objectives and barriers to adoption.

These contents will be taught in a totally online modality, without timetables and with the syllabus available in its entirety from the first day. All you need is a device with Internet access. In this way, the student will be able to organize himself at his convenience, thus facilitating learning.

This **Postgraduate Certificate in IoT Technologies Architecture** contains the most complete and updated educational program in the market. The most important features include:

- The development of case studies presented by experts in IoT Technology Architecture

- The graphic, schematic and eminently practical contents with which it is conceived scientific and practical information on those 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

- Access to content from any fixed or portable device with an Internet connection

The future is green. Learn thanks to TECH the best sustainability solutions applied to IoT"

The healthcare and logistics sectors are conveniently implementing IoT. If you enroll you will work with the most relevant use cases"

The cities of the future are Smartcities. Learn how it works through the real examples presented in this program.

In the IoT solution architecture section you will learn how to design an architecture and manage the data of an IoT solution.

The program includes, in its teaching staff, professionals from the sector who bring to this training the experience of their work, in addition to recognized specialists from prestigious reference societies and 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 training programmed to train 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. This will be done with the help of an innovative system of interactive videos made by renowned experts.
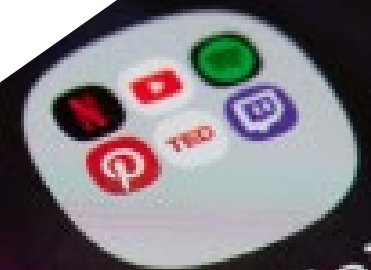
02
Objectives

The ultimate goal of this degree is to instruct students in the development of use cases associated with IoT. To get to this point, it will be necessary to generate specialized knowledge about IoT, to know the criteria for building a solution, to develop develop consultative capabilities and determine the operating model.
All this, based on the importance of this technology for society.

The program proposed by TECH includes a section dedicated to Deep Learning. Very useful for, for example, automating processes in the industrial sector"

General Objectives

- Developing a use case associated with IoT
- Define a high-level architecture of an IoT use case
- Evaluate the suitability of the use of IoT solutions
- Demonstrate knowledge of IoT solutions on the market and how they are built

In this degree you will learn what are the competencies of the engineer IoT and the certifications recognized in the market"

Specific Objectives

- Generate specialized knowledge on IoT
- Defining the criteria for building an IoT solution
- Develop consultative capabilities in the application of IoT use cases
- Determining the operating model of an IoT solution
- Justify the importance of IoT technology in society and in the coming years

03
Course Management

To work in the IoT field, it is essential to maintain a vision for the future.
For this reason, TECH has selected an ambitious faculty, which has been involved in several IoT projects and that keeps abreast of industry innovations.
 In addition, real examples and use cases will be used during the course, to learn first-hand about the development of projects and be inspired to start one of your own.

Graduates will have learned to work with the main IoT solution platforms, being able to subsequently implement them in their own projects"

Management

Mr. Olalla Bonal, Martín

- Technical sales blockchain specialist en IBM
- Blockchain Hyperledger and Ethereum Architecture Manager at Blocknitive
- Director of the Blockchain area at PSS Information Technologies
- Director de Información en ePETID - Global Animal Health
- IT Infrastructure Architect at Bankia - wdoIT (IBM - Bankia Join Venture)
- Project director and manager at Daynet integral services
- Director of Technology at Wiron Construcciones Modulares
- Head of IT Department at Dayfisa
- Head of IT department at Dell Computer, Majsa and Hippo Viajes
- Electronics Technician in IPFP Juan de la Cierva

Professors

D. Nogales Ávila, Javier

- Enterprise Cloud and sourcing senior consultant. Quint
- Cloud and Technology Consultant. Indra
- Associate Technology Consultant. Accenture
- Graduate by Jaen University y University of Technology and Economics of Budapest (BME)
- Degree in Industrial Organization Engineering

04
Structure and Content

The Postgraduate Certificate in IoT Technologies Architecture begins with an overview of the Internet of Things ecosystem. Discussing the different architectures, platforms, solutions, etc. Then, he will focus on current concepts such as Smart Things or the perspective of sustainability; and use cases applied to different sectors. Finally, the business ecosystem, the role of the engineer and the present and future challenges presented by the IoT are analyzed.

"
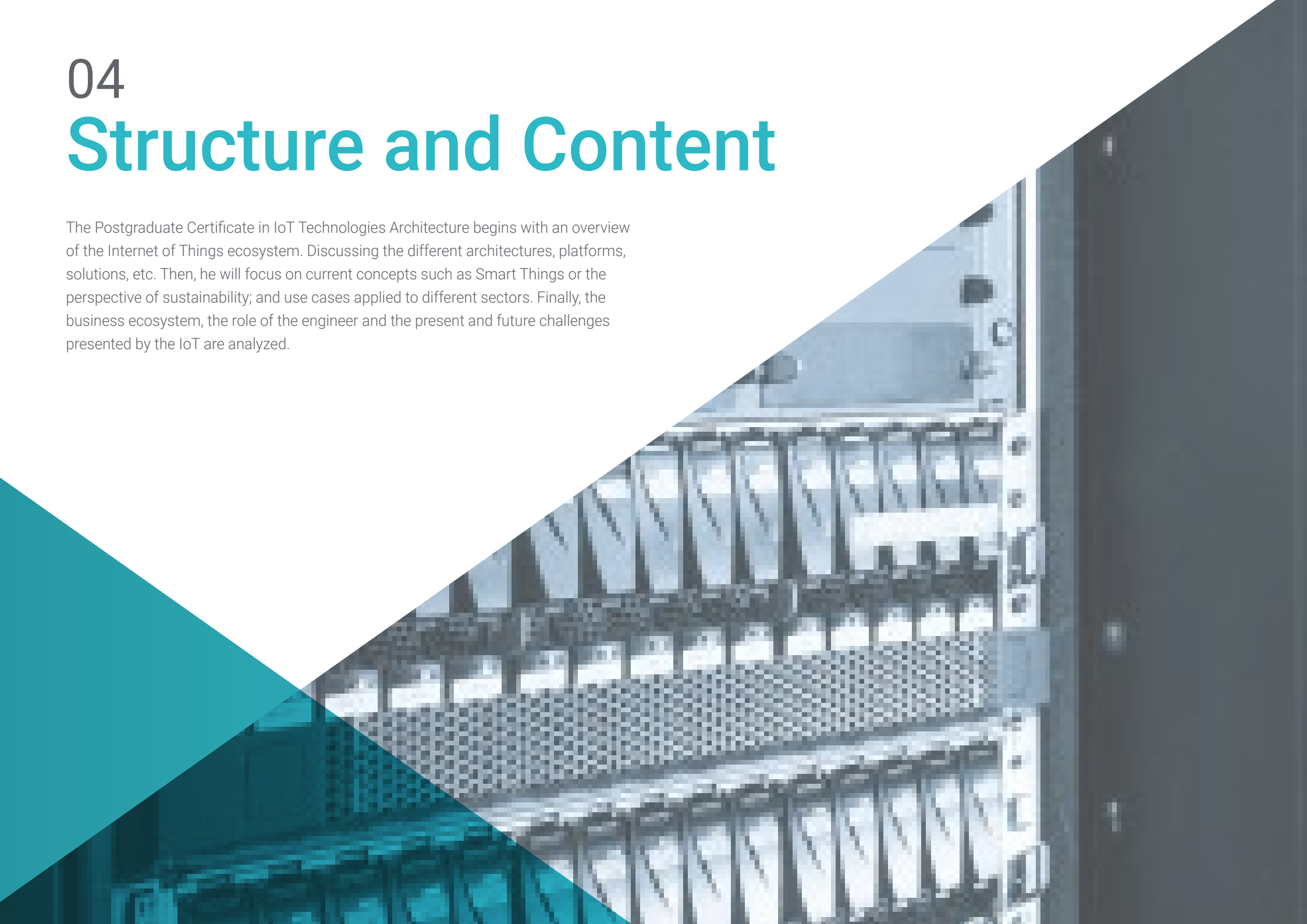
In this degree you will learn the objectives set around the IoT and the barriers that are presented so that you will be aware of the evolutions in the sector"

Module 1. IoT Technologies Architecture

1.1.   The Art of the Internet of Things (IoT)
    1.1.1.   Internet of Things IoT
    1.1.2.   IoT Technologies
    1.1.3.   Internet of Things. Advanced Concepts

1.2.   IoT Solution Architecture
    1.2.1.   IoT Solutions Architecture
    1.2.2.   Design of an IoT Architecture
    1.2.3.   Operation and Data Management of an IoT Solution

1.3.   IoT and other Technology Trends
    1.3.1.   Cloud Computing
    1.3.2.   Machine/Deep Learning
    1.3.3.   Artificial Intelligence

1.4.   IoT Solution Platforms
    1.4.1.   Development Platforms
    1.4.2.   IoT Solutions
    1.4.3.   IoT Solutions Platforms. Advanced Concepts

1.5.   Smart things
    1.5.1.   Smartbuildings
    1.5.2.   Smartcities
    1.5.3.   Intelligent Networks

1.6.   Sustainability and IoT
    1.6.1.   Sustainability and Emerging Technologies
    1.6.2.   Sustainability in IoT
    1.6.3.   Sustainable IoT use Cases

1.7.   IoT. Use Cases
    1.7.1.   Cases of use in the Healthcare Sector
    1.7.2.   Use Cases in Industrial Environments
    1.7.3.   Use Cases in the Logistics Sector
    1.7.4.   Cases of use in the Agriculture and Livestock Sector
    1.7.5.   Other use Cases

Enroll in TECH and discover the enormous synergies that are being are being created between IoT and cloud computing"

05
Methodology

This training program offers 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"

At TECH we use the Case Method

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

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

We are the first online university to combine Harvard Business School case studies with a 100% online learning system based on repetition.

A learning method that is different and innovative.

This intensive Information Technology program at TECH Technological University prepares you to face all the challenges in this field, both nationally and internationally. We are committed to promoting your personal and professional growth, the best way to strive for success, that is why at TECH Technological University you will use Harvard case studies, with which we have a strategic agreement that allows us, to offer you material from the best university in the world.

" 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.

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

Relearning Methodology

Our university is the first in the world to combine Harvard University case studies with a 100% online learning system based on repetition, which combines different teaching elements in each lesson.

We enhance Harvard case studies 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 university 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.

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. 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 competencies and skills in each thematic area. Exercises and activities to acquire and develop the skills and abilities that a specialist 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%

20%

25%

4%

3%

Case Studies

They will complete a selection of the best case studies in the field used at Harvard. 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 multimedia content presentation training Exclusive system 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 your goals.

06
Certificate

The Postgraduate certificate in IoT Technologies Architecture guarantees, in addition to the most rigorous and update training, access to a Postgraduate Certificate issued by TECH Technological University.

Successfully complete this training and receive your university degree without travel or laborious paperwork"

This **Postgraduate Certificate in IoT Technologies Architecture** contains the most complete and update program on the market.

After the student has passed the evaluations, they will receive their corresponding **Postgraduate Certificate** issued by **TECH Technological University** by 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 IoT Technologies Architecture**

Official Nº of Hours: **150 hours.**

tech technological university

Awards the following

CERTIFICATE

to

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

For having passed and accredited the following program

POSTGRADUATE CERTIFICATE

in

IoT Technologies Architecture

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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