Postgraduate Diploma
Cloud Infrastructure Governance

tech technological university

Postgraduate Diploma
Cloud Infrastructure Governance

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

Website: **www.techtitute.com/us/information-technology/postgraduate-diploma/postgraduate-diploma-cloud-infrastructure-governance**

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01
Introduction

The factor of compliance with regulations and legislation surrounding the area of Cloud Infrastructures is essential. The demands of each state on the data under custody and the search for security in cloud operations are just some of the reasons why professionals in this area, specialized in Governance, are in such high demand. For this reason, TECH has designed a degree that seeks to delve into topics such as the Cloud Computing Ecosystem, Security, Agile Management or Governance, Laws, Regulations and Contracts in the Cloud environment. All this in a convenient online mode, which gives total freedom of organization to the student.

Become an expert in Cloud Infrastructure Governance, with the most complete theoretical and practical content in the academic market"

One of the most relevant areas in the area of Cloud Infrastructures is compliance with technical requirements and technological legislation. In addition, it is also necessary to take into account the regulatory differences depending on the location, since Cloud Computing can be accessed at any geographic location. For all these reasons, professionals in this area who master the administration and governance services are increasingly necessary to optimize the use of resources and ensure compliance with security requirements.

For this reason, TECH has designed a Postgraduate Diploma in Cloud Infrastructure Governance, to provide students with the skills and knowledge necessary to meet the challenges they may encounter in Cloud governance. And this, through a syllabus that addresses topics such as Service Management, Security and Compliance Challenges, the Cloud Governance Standard or Certifications and Accreditations in Cloud Environments.

All this, with the possibility of combining it with daily activities and other work, without limitations of any kind, thanks to a convenient 100% online mode, which allows students to organize themselves as best suits them. Besides, offer a very complete multimedia content, the most updated information and the most innovative teaching tools.

This **Postgraduate Diploma in Cloud Infrastructures Governance** contains the most complete and up-to-date program on the market. The most important features include:

- The development of practical cases presented by experts in Cloud Infrastructures Governance

- 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 self-assessment can be used 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

Enroll now and delve deeper into your knowledge of security and compliance challenges"

Learn all about Privacy, Approvals and Regulatory Frameworks in Cloud Environments, in just 6 months and with total freedom of time.

Organize your own way and acquire new skills in terms of Laws and Regulations in Cloud Environments.

"

Get to know all the features of Privacy in the Americas, Asia Pacific, Middle East or Africa, with the most dynamic and comprehensive multimedia materials"

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

Its multimedia content, developed with the latest educational technology, will allow professionals to learn in a contextual and situated learning environment, i.e. a simulated environment that will provide immersive education , programmed to prepare for real situations.

The design of this program focuses on Problem-Based Learning, by means of which professionals must try to solve the different professional practice situations that are presented to them throughout the academic year. For this , purpose, students will be assisted by an innovative interactive video system developed by renowned experts.

02
Objectives

The objective of this Postgraduate Diploma in Cloud Infrastructure Governance is to provide students with the tools and skills to address the challenges and drawbacks that a company has to face in Cloud governance. All this, thanks to the most complete and updated most up-to-date and practical contents that can be found in the academic market.

Learn all about regulatory frameworks and certifications, thanks to the most dynamic and comprehensive training materials"

General Objectives

- Develop specialized knowledge about what infrastructures are and what motivations exist for their transformation to the cloud

- Acquire the skills and knowledge necessary to implement and manage IaaS solutions effectively

- Acquire specialized knowledge to add or remove storage and processing capacity quickly and easily, enabling you to adapt to fluctuations in demand

- Examine the scope of Network DevOps, demonstrating that it is an innovative approach for network management in IT environments.

- Understand the challenges faced by an enterprise in Cloud governance and how to address them

- Use security services in Cloud environments such , as Firewalls, SIEMS and threat protection , to secure applications and services

- Establish best practices in the use of Cloud Services and the main recommendations when using them

- Increase user efficiency and productivity: by enabling users to access their applications and data from anywhere and on any electronic device, VDI can improve user efficiency and productivity

- Gain specialized knowledge about Infrastructure as Code

- Identify key points to demonstrate the importance of investing in backup and monitoring in organizations
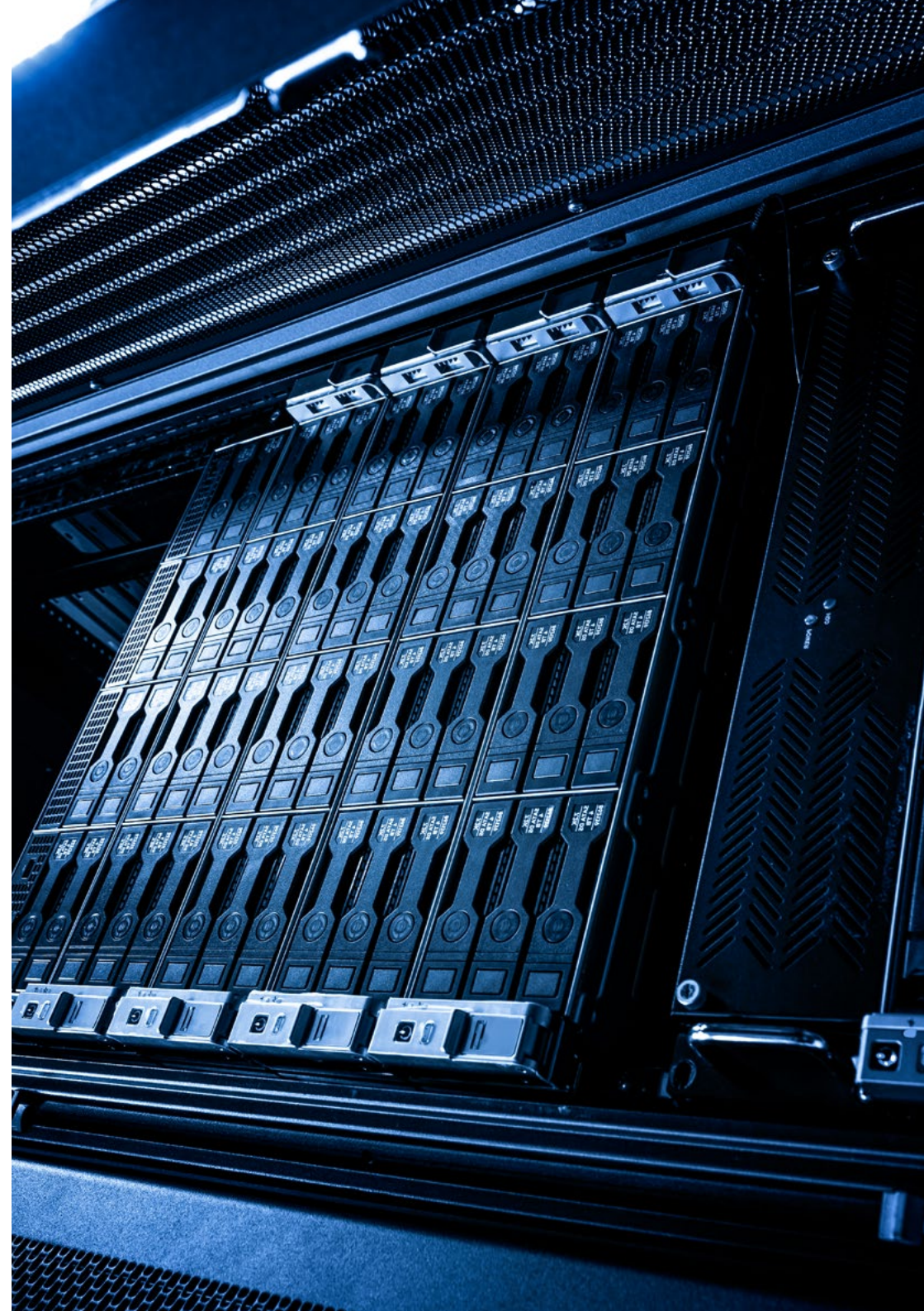
Specific Objectives

Module 1. Transformation of IT Infrastructures Cloud Computing

- List the types of clouds that exist
- Analyze the factors for Cloud Computing adoption
- Identify the types, models and elements of Cloud Computing
- Concretize how Cloud Infrastructures work and relevant aspects
- Analyze existing ecosystems and their pillars for successful transformation
- Establish an overview of the different vendors and how they can help the implementation of Cloud Computing
- Present an overview of the automation and security strategy
- Generate a first environment for the management of infrastructures under a DevOps or DevSecOps culture
- Discover the future and evolution of infrastructures, analyzing the challenges and technologies in the field of security and compliance

Module 2. Government in Cloud Infrastructures

- Analyze the key concepts of compliance and their importance in the Cloud context
- Identify the main challenges faced by a CISO in Cloud governance and how to address them
- Establish the main privacy considerations in the Cloud context and how to ensure compliance with applicable regulations
- Examine the relevant regulatory frameworks and certifications in the Cloud environment
- Develop how cloud billing works and how resource usage can be optimized
- Delve into the use of management and governance services in AWS and Azure to optimize resource usage and ensure compliance with security requirements

Module 3. Infrastructure as a Service ((IaaS)

- Examine the abstraction layers in Cloud Computing and how they relate to each other
- Concretize the effective management of the Cloud Computing abstraction layers
- Analyze the core decisions in building a Cloud Architecture
- Evaluate how digital transformation and the Cloud can drive business success
- Delve into the DevOps approach and how it can improve the efficiency and effectiveness of software development and delivery
- Establish the different cloud computing resources available and how they can be used effectively

Orient your profile towards one of the areas with the greatest potential in the field of Cloud Infrastructures and achieve your most demanding goals"

03
Course Management

In its quest to achieve the highest educational quality, TECH has a team of renowned professionals that make up its team of experts in different subjects. For this degree, a teaching staff has been created with the ability to design the most complete syllabus and adjusted to the needs and objectives of the students. All this has resulted in a dynamic, precise and innovative program that represents a unique learning opportunity in this field.

Achieve your goals and multiply your chances in the labor market, thanks to this Postgraduate Diploma in Cloud Infrastructure Governance"

Management

Mr. Bressel Gutiérrez-Ambrossi, Guillermo

- Specalist in Systems Administration and Computer Networks
- Storage and SAN Network Administrator at Experis IT (BBVA)
- Network Administrator at IE Business School
- Graduate in Computer Systems and Network Administration at ASIR (ASIR)
- Ethical Hacking course at OpenWebinar
- Powershell course at OpenWebinar

Professors

Mr. Navarrete Aranda, Luis

- Cloud OPS, Senior Devops Engineer, Cloud Solutions Architect at Globant EC
- Microsoft Trainer
- Regional Cloud Solutions Specialist at Software One Ecuador
- Cloud Commercial Architect at Alfapeople Ecuador
- Master's Degree in from TI Project Management from of La Rioja. University (UNIR).
- Systems Engineer with mention in Administration of New Technologies from Ecotec University.

Ms. Torres Palomino, Carolina

- Director of Management Control and Finance at Phone House
- Audit Senior Deloitte
- Degree in Business Administration from Universidad Autonomous de Madrid.
- Professional Master's Degree in Auditing and Management Development at ICADE

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 Postgraduate Diploma in Cloud Infrastructure Governance has been created and designed by TECH's team of experts in the field. In addition, each part of the syllabus has been based on the efficient pedagogical methodology of Relearning, which guarantees the best assimilation of the contents by students, in a dynamic and natural way, without the need to spend too much time studying.

A syllabus designed under the requirements and demands of the most innovative and efficient pedagogical methodology, Relearning"

Module 1. Transformation of IT Infrastructures Cloud Computing

1.1. Cloud Computing Cloud Computing Adoption

1.1.1. Computing

1.1.2. Cloud Computing Adoption

1.1.3. Types of Cloud Computing

1.2. Cloud Computing Adoption. Adoption Factors

1.2.1. Adoption Factors of Cloud Infrastructures

1.2.2. Uses and Services

1.2.3. Evolution

1.3. Cloud Computing Infrastructures

1.3.1. Cloud Computing Infrastructures

1.3.2. Types of Infrastructures (IaaS, PaaS, SaaS)

1.3.3. Types of Implementation (private, public, hybrid)

1.3.4. Elements (hardware, storage, network)

1.4. Cloud Computing Infrastructure: Operation

1.4.1. Virtualization

1.4.2. Automation

1.4.3. Management

1.5. Cloud Computing Ecosystem

1.5.1. Observability and Analysis

1.5.2. Procurement.

1.5.3. Orchestration and Management

1.5.4. Cloud Platforms

1.6. Services Management in Cloud Infrastructures

1.6.1. Service Orientation

1.6.2. Standard and Ecosystem

1.6.3. Types of Services

1.7. Cloud Infrastructure Management Automation

1.7.1. Ecosystem

1.7.2. DevOps Culture

1.7.3. Infrastructure as Code (Terraform, Ansible, Github, Jenkins)

1.8. Security in Cloud Infrastructures

1.8.1. Ecosystem

1.8.2. DevSecOps Culture

1.8.3. Data Science

1.9. Preparation of the Cloud Infrastructure Management Environment

1.9.1. Data Science

1.9.2. Preparation of the Environment

1.9.3. First Steps

1.10. Cloud Infrastructures Future and Evolution

1.10.1. Cloud Infrastructures Challenges

1.10.2. Evolution of Cloud Infrastructures

1.10.3. Challenges in Security and Compliance

Module 2. Government in Cloud Infrastructures

2.1.   Compliance with in Cloud Environments

    2.1.1.   Shared Responsibilities Model

    2.1.2.   Laws, regulations and contracts

    2.1.3.   Audits

2.2.   The CISO in Cloud Governance

    2.2.1.   Organizational Framework. Figures of the CISO in the Organization

    2.2.2.   Relationship of the CISO with the data processing areas.

    2.2.3.   GRC strategy against Shadow IT

2.3.   Cloud Governance Standard

    2.3.1.   Previous assessments

    2.3.2.   Cloud service provider compliance

    2.3.3.   Personnel obligations

2.4.   Privacy in Cloud Environments

    2.4.1.   Consumer and User Relationship with Privacy

    2.4.2.   Privacy in the Americas, Asia Pacific, Middle East and Africa

    2.4.3.   Privacy in the European context

2.5.   Approvals and Regulatory Frameworks in Cloud Environments

    2.5.1.   American approvals and frameworks

    2.5.2.   Asian approvals and frameworks

    2.5.3.   European approvals and frameworks

2.6.   Certifications and accreditations in Cloud Environments

    2.6.1.   America and Asia Pacific

    2.6.2.   Europe, Middle East and Africa

    2.6.3.   Global

2.7.   Laws / Regulations in Cloud Environments

    2.7.1.   CLOUD Act,HIPAA, IRS 1075

    2.7.2.   ITAR, SEC Rule 17a-4(f), VPAT/Section

    2.7.3.   European regulation

2.8.   Cost control and billing in Cloud Governance

    2.8.1.   Pay-Per-Use Models Costs

    2.8.2.   Figure of the CFO and FinOps Profiles

    2.8.3.   Cost control

2.9.   Tools in Cloud Governance

    2.9.1.   OvalEdge

    2.9.2.   ManageEngine ADAudit Plus

    2.9.3.   Erwin Data Governance

2.10.   Corporate Governance

    2.10.1.   Code of Conduct

    2.10.2.   Whistleblower Channel

    2.10.3.   Due Diligence

Module 3. Infrastructure as a Service (IaaS)

3.1.   Cloud Computing Abstraction Layers and their Management
    3.1.1.   The Abstraction. Core Concepts
    3.1.2.   Services Models
    3.1.3.   Management of Cloud Services. Benefits
3.2.   Construction of Architecture. Core Decisions
    3.2.1.   HDDC and SDDC. Hypercompetition
    3.2.2.   Market
    3.2.3.   Working Model and Professional Profiles Changes
        3.2.3.1. Figure of the Cloudbroker
3.3.   Digital Transformation and Cloud Infrastructures
    3.3.1.   Cloud Work Demo
    3.3.2.   The Role of the Navigator as Tool
    3.3.3.   New Device Concept
    3.3.4.   Advanced Architectures and the Role of the CIO
3.4.   Agile Management in Cloud Infrastructures
    3.4.1.   Life Cycle of New Services and Competitiveness
    3.4.2.   Development Methodology of Apps and Microservices
    3.4.3.   Relationship between Development and IT Transactions
        3.4.3.1. Use of Cloud as Support
3.5.   Cloud Computing Resources I. Identity, Storage and Domain Management
    3.5.1.   Identity and Access Management
    3.5.2.   Secure Data Storage, Flexible File and Database Storage
    3.5.3.   Domain Management
3.6.   Cloud Computing Resources II. Network, Infrastructure and Monitoring Resources
    3.6.1.   Private Virtual Network
    3.6.2.   Cloud Computing Capabilities
    3.6.3.   Monitoring

Access all the main material and a wide variety of additional information, to become a Cloud Governance expert"

05

Methodology

This academic program offers students a different way of learning. Our methodology follows a cyclical learning process: **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.

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.

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

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.

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 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.

30%

10%

8%

20%

25%

4%

3%

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 Diploma in Cloud Infrastructure Governance 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"
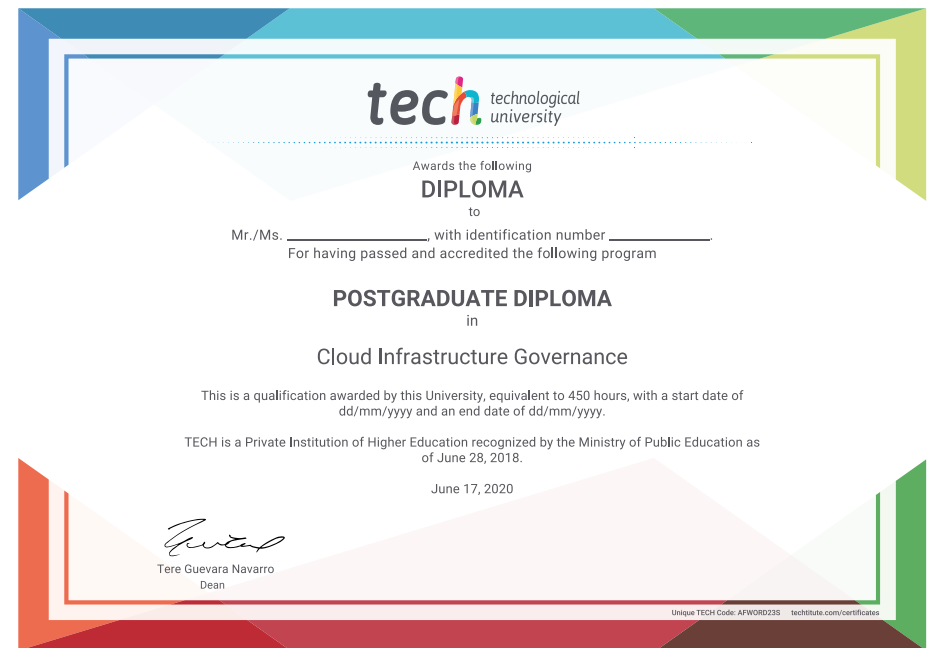
This **Postgraduate Diploma in Cloud Infrastructures Governance** contains the most complete and up-to-date program on the market.

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

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

Title: **Postgraduate Diploma in Governance of Cloud Infrastructures**

Official No. of Hours: **450 h.**

tec**h** technological university

Awards the following

DIPLOMA

to

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

For having passed and accredited the following program

POSTGRADUATE DIPLOMA

in

Cloud Infrastructure Governance

This is a qualification awarded by this University, equivalent to 450 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 diploma issued with an apostille, TECH EDUCATION will make the necessary arrangements to obtain it, at an additional cost.

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