Postgraduate Diploma
Cloud Architecture

tech *global university*

Postgraduate Diploma
Cloud Architecture

- » Modality: **online**
- » Duration: **6 months**
- » Certificate: **TECH Global University**
- » Credits: **18 ECTS**
- » Schedule: **at your own pace**
- » Exams: **online**

Website: **www.techtitute.com/us/information-technology/postgraduate-diploma/postgraduate-diploma-cloud-architecture**
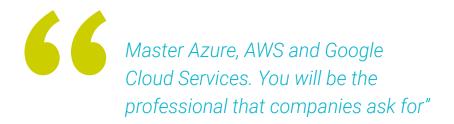
Index

01
Introduction

Implementing correct Cloud Architecture in a company reduces costs and promotes efficiency in the management of their daily information. However, the speed of transformation at which applications are currently being developed can be a vulnerability to be avoided by any IT professional providing services. In this program, students will acquire the key learning for the design of the Cloud Computing Architecture, allowing them to develop applications and deploy them in production with all the guarantees. All this will allow them to advance in their career, thanks to this 100% online teaching and an updated interactive content adapted to the current market demands.

Become the Cloud architect that companies in the sector require thanks to this Postgraduate Diploma"

The Cloud Architect is a professional profile increasingly in demand in the sector of new technologies. Despite the initial reluctance of companies to incorporate the cloud into their work systems, due to the vulnerability of the network, this mentality has changed in recent years thanks to the increase of specialized and qualified professionals in this field.

Thanks to this Postgraduate Diploma, students will learn to design a reference architecture for application development and deployment in production with all the guarantees. The program addresses the different computing paradigms, their potential and the fundamentals of cloud computing. The analysis of practical cases will allow professionals to learn about the security issues of cloud computing, as well as the main requirements in hardware or software architecture.

A 100% online program, which is an opportunity for IT professionals who are looking for a specialization to improve their field of work. Without fixed schedules and with access from any electronic device with internet connection, students can improve their skills and delve into a technological field in constant transformation.

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

- Practical cases presented by experts in Digital Transformation
- 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
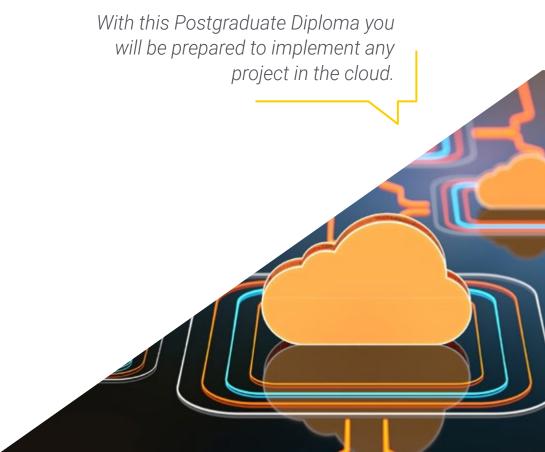- Content that is accessible from any fixed or portable device with an Internet connection

Master Azure, AWS and Google Cloud Services. You will be the professional that companies ask for"

"Expand your knowledge of Cloud infrastructures, its security and correctly create a Hyperledger Fabric network with this Postgraduate Diploma"

Master Cloud Architecture and offer the best solutions to the companies in case of risk. Enroll in this Postgraduate Diploma.

With this Postgraduate Diploma you will be prepared to implement any project in the cloud.

The program's teaching staff includes professionals from the 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 in 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 arise during the academic year. For this purpose, the student will be assisted by an innovative interactive video system created by renowned and experienced experts.

02
Objectives

Upon completion of the Postgraduate Diploma in Cloud Architecture, IT professionals will be able to gain a deep knowledge of Azure, AWS and Google Cloud services, develop a detailed knowledge of the architectural foundations and identify the vulnerability of the Public Cloud. All this, will allow them to improve in a technological field that requires highly qualified personnel. Interactive content, complementary readings and case studies will help students achieve their goals.

tech

Broaden your professional horizons. Don't doubt your potential and sign up with just one click"

General Objectives

- Analyze the different approaches to cloud adoption and their contexts
- Acquire specialized knowledge to determine the appropriate Cloud
- Develop a virtual machine in Azure
- Establish the sources of threats in application development and best practices to apply
- Evaluate the differences in the specific implementations of different public Cloud vendors
- Determine the different technologies applied to containers
- Identify the key aspects of a Cloud Native adoption strategy
- Fundamentals and evaluation of the programming languages most commonly used in Big Data, necessary for data analysis and processing

"Ensure the security of companies working in the cloud. Design a Cloud infrastructure in compliance with Data Protection regulations"

Specific Objectives

Module 1. Cloud Programming Azure, AWS and Google Cloud Services

- Generate specialized knowledge about the cloud and the differences with traditional on-premise solutions
- Acquire specialized vocabulary fundamental to the cloud Master the terms used by different vendors
- Establish the main components of the cloud and its uses.
- Determine the vendors in the cloud market, their strengths and weaknesses, and contributions

Module 2. Architecture Programming in Cloud Computing

- Develop specialized knowledge on the bases of architecture
- Specialize the student in the knowledge of Cloud infrastructures.
- Evaluate advantages and disadvantages of deploying On Premise or in the Cloud
- Determine infrastructure requirements
- Identify deployment options
- Train for the implementation of a Cloud infrastructure in production
- Design and define the operation and maintenance of a Cloud architecture

Module 3. Cloud Environments: Security/Safety

- Identifying risks of a public cloud infrastructure deployment
- Analyze security risks in application development
- Determine security requirements
- Develop a security plan for a cloud deployment
- Establish guidelines for a logging and monitoring system
- Propose incident response actions

03
Course Management

In order to provide the IT professional with the most updated and enriched content on Cloud Architecture, TECH carries out a rigorous selection of the teaching staff of all the programs. The Teaching Team of this Postgraduate Diploma is composed of experienced professionals in Cloud Computing and with a specialization in this field. In addition, they stand out for their human quality and closeness to the students, from whom they will take the best to help them achieve their professional goal.

"

Teachers specialized in Cloud Architecture will provide you tutoring in this Postgraduate Diploma for you to be the best professional"

Management

Mr. Bressel Gutiérrez-Ambrossi, Guillermo

- Specialist in Systems Administration and Cpmputer 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
- Powershel course at OpenWebinar

Professors

D. Gómez Rodríguez, Antonio

- Principal Cloud Solutions Engineer for Oracle
- Co-organizer of Málaga Developer Meetup
- Specialist Consultant for Sopra Group and Everis
- Team Leader at System Dynamics
- Software Developer at SGO Software
- Master's Degree in E-Business from La Salle Business School
- Postgraduate Degree in Information Technologies and Systems, Catalan Institute of Technology
- Degree in Telecommunications Engineering from the Polytechnic University of Catalonia

Mr. Torres Palomino, Sergio

- IT Engineer with expertise in Blockchain
- Blockchain Lead at Telefónica
- Blockchain Architect at Signeblock
- Blockchain Developer at Blocknitive
- Writer and Publisher at O´Really Media Books
- Lecturer in postgraduate studies and Blockchain related courses
- Degree in Computer Engineering from San Pablo CEU University
- Master's Degree in Big Data Architecture
- Master's Degree in Big Data and Business Analytics

D. Bernal de la Varga, Yeray

- Big Data Solutions Architect at Orange Bank
- Big Data Architect at Bankia
- Big Data Engineer at Hewlett-Packard
- Adjunct Professor in the Master of Big Data at the University of Deusto
- Degree in IT from the Polytechnic University of Madrid
- Expert in Big Data by U-TAD

Take the opportunity to learn about the latest advances in this field in order to apply it to your daily practice"
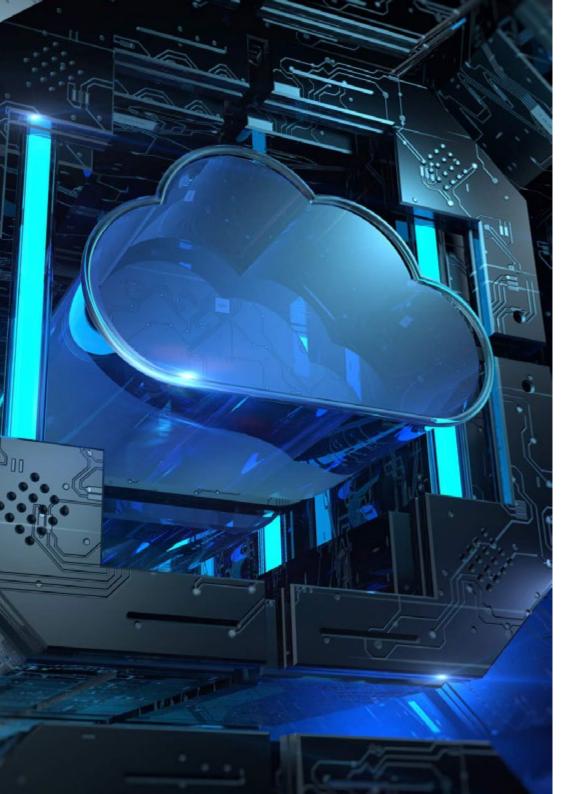
04
Structure and Content

The curriculum of this Postgraduate Diploma is made up of three blocks that start from a general knowledge of Cloud programming to delve into services such as Azure, Aws or Google Cloud It also lays the foundations for the proper implementation of a project by establishing from its economic costs to the human resources to be employed. The multimedia library and the Relearning system, based on the reiteration of content, will facilitate the learning of professionals seeking a specialization with an updated syllabus.

Download the interactive content from any electronic device, so you can learn at your own pace, without fixed schedules and without in-person attendance"

Module 1. Cloud Programming: Azure, AWS and Google Cloud Services

1.1. Cloud Cloud Services and Technologies
    1.1.1. Cloud Services and Technologies
    1.1.2. Cloud Terminology
    1.1.3. Reference Cloud Providers
1.2. Cloud Computing
    1.2.1. Cloud Computing
    1.2.2. Cloud Computing Ecosystem
    1.2.3. Types of Cloud Computing
1.3. Cloud Service Models
    1.3.1. IaaS Infrastructure as a Service
    1.3.2. SaaS Software as a Service
    1.3.3. PaaS Platform as a Service
1.4. Cloud Computing Technologies
    1.4.1. Virtualization Systems
    1.4.2. Service-Oriented Architecture (SOA)
    1.4.3. GRID Computing
1.5. Architecture Cloud Computing
    1.5.1. Architecture Cloud Computing
    1.5.2. Network Types in Cloud Computing
    1.5.3. Cloud Computing Security
1.6. Public Cloud
    1.6.1. Public Cloud
    1.6.2. Public Cloud Architecture and Costs
    1.6.3. Public Cloud Typology
1.7. Private Cloud
    1.7.1. Private Cloud
    1.7.2. Architecture and Costs
    1.7.3. Private Cloud Typology
1.8. Hybrid Cloud
    1.8.1. Hybrid Cloud
    1.8.2. Architecture and Costs
    1.8.3. Hybrid Cloud Typology
1.9. Cloud Providers
    1.9.1. Amazon Web Services
    1.9.2. Azure
    1.9.3. Google
1.10. Cloud Security
    1.10.1. Infrastructure Security
    1.10.2. Operating System and Network Security
    1.10.3. Cloud Risk Mitigation

Module 2. Architecture Programming in Cloud Computing

2.1. Cloud Architecture for a University Network Cloud Provider Selection   Practical Example
    2.1.1. Cloud Architecture Approach for a University Network According to Cloud Provider
    2.1.2. Cloud Architecture Components
    2.1.3. Analysis of Cloud Solutions According to Proposed Architecture
2.2. Economic Estimation of the Project for the Creation of a University Network Financing
    2.2.1. Cloud Provider Selection
    2.2.2. Economical Estimation According to Components
    2.2.3. Project Financing
2.3. Estimation of Human Resources of the Project Composition of a Software Team
    2.3.1. Composition of the Software Development Team
    2.3.2. Roles in a Development Team Typology
    2.3.3. Assessment of the Economic Estimation of the Project

Module 3. Cloud Environments: Security/Safety

Improve security practices in production environments with containers and offer professional services with guarantees"

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.

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.

30%

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.
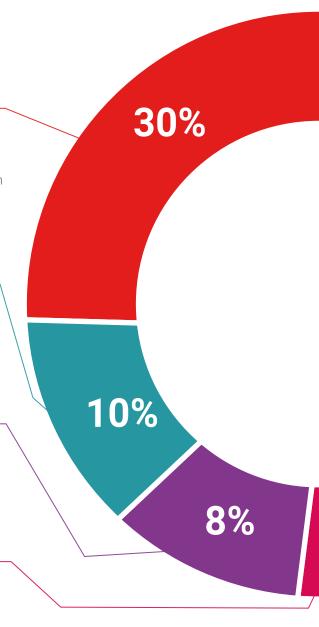
10%

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.

8%

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.

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

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

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

This program will allow you to obtain your **Postgraduate Diploma in Cloud Architecture** endorsed by **TECH Global University**, the world's largest online university.

TECH Global University is an official European University publicly recognized by the Government of Andorra (*official bulletin*). Andorra is part of the European Higher Education Area (EHEA) since 2003. The EHEA is an initiative promoted by the European Union that aims to organize the international training framework and harmonize the higher education systems of the member countries of this space. The project promotes common values, the implementation of collaborative tools and strengthening its quality assurance mechanisms to enhance collaboration and mobility among students, researchers and academics.

This **TECH Global University** title is a European program of continuing education and professional updating that guarantees the acquisition of competencies in its area of knowledge, providing a high curricular value to the student who completes the program.

Title: **Postgraduate Diploma in Cloud Architecture**

Modality: **online**

Duration: **6 months**

Accreditation: **18 ECTS**

tech global university

Mr./Ms. _____, with identification document _____ has successfully passed and obtained the title of:

Postgraduate Diploma in Cloud Architecture

This is a program of 450 hours of duration equivalent to 18 ECTS, with a start date of dd/mm/yyyy and an end date of dd/mm/yyyy.

TECH Global University is a university officially recognized by the Government of Andorra on the 31st of January of 2024, which belongs to the European Higher Education Area (EHEA).

In Andorra la Vella, on the 28th of February of 2024

Dr. Pedro Navarro Illana
Rector

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 Global University will make the necessary arrangements to obtain it, at an additional cost.

tech global university

Postgraduate Diploma
Cloud Architecture

» Modality: **online**
» Duration: **6 months**
» Certificate: **TECH Global University**
» Credits: **18 ECTS**
» Schedule: **at your own pace**
» Exams: **online**

Postgraduate Diploma
Cloud Architecture

tech global university