Postgraduate Certificate
Blockchain and Big Data in Software Engineering

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Postgraduate Certificate
Blockchain and Big Data in Software Engineering

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

Website: **www.techtitute.com/us/information-technology/postgraduate-certificate/blockchain-big-data-software-engineering**

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01
Introduction

Software engineering is the art of creating applications. Therefore, it is something that is a constant part of our lives. Developing an application is complex, as it involves many processes from its conception to its production, and there are many parties involved. Making it essential that everything fits together perfectly. In this sense, TECH has developed a very complete program that can be applied to real projects. With some examples of software applications to IT, frontend and backend development, container management in cloud computing or software-oriented blockchain, among other contents. All of them, taught in a 100% online mode and without timetables. It favors the student's organization and facilitates work and family conciliation.

" *In this course you will learn how to develop the frontend of a mobile app with the most used programming languages: HTML & Java Script"*

When you think of an application, you quickly think of the cell phone. This is its most widespread form, but not the only one. The touchscreen of a vehicle or the touchscreen of a food processor also contains applications created by software. The possibilities of this technology are very varied, and much remains to be discovered.

The program begins by analyzing the different applications of software to information technologies, as well as their life cycles and architectures. Then we move on to a related topic: IT project management and methodology.

Next, we will work on the development of the application itself with the topics dedicated to the frontend and backend. As well as data storage and cloud computing. Reserving a section for testing and continuous integration.

The last part of the Postgraduate Certificate will deal with blockchain applied to software and software applied to Big Data, Artificial Intelligence and the Internet of Things. To close, we will delve into a recurring theme in all digital environments: security. In this case, applied to IT software.

These contents will be taught in a totally online modality, without timetables and with all the contents available from the first day. To access them you only need a device with internet access. In this way, it is the student who establishes his or her own time, thus favoring the internalization of learning.

This **Postgraduate Certificate in Blockchain and Big Data in Software Engineering** contains the most complete and up-to-date educational program on the market. The most important features include:

» The development of case studies presented by Blockchain and Big Data experts in Software Engineering

» The graphic, schematic, and eminently practical contents with which they are created, provide scientific and 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 and learn the most used architectures and methodologies in software applied to information technologies"

TECH faculty will teach you backend programming languages so that you can develop applications in a professional manner"

During this program you will learn how to work with Docker Technology and Docker-Compose for container management in cloud computing.

TECH has reserved a theme for blockchain, which includes cryptocurrencies as one of its most successful applications.

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

The multimedia content, developed with the latest educational technology, will provide the professional with situated and contextual learning, i.e., a simulated environment that will provide immersive 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

Graduates will be able to develop software based on the different technologies of each sector and the available methodologies. They will know how to develop applications from start to finish, using the main programming languages, they will get notions of cloud computing and storage and will understand the relationship between software and the latest advances in IT such as Artificial Intelligence, Big Data or the Internet of Things.

Blockchain technology is growing exponentially. In this Postgraduate Certificate you will obtain all its keys"

General Objectives

» Develop the *software* creation process

» Determine the different technologies for each sector

» Analyze work methodologies

» Evaluate the knowledge acquired

Specific Objectives

» Acquire specialized knowledge in project management methodologies
» Analyze the life cycle of an application
» Explore the different architectures
» Identify programming methodologies

TECH faculty will teach you how to use Angular, a platform for creating mobile and desktop applications"

03
Course Management

For this degree program, we have selected a faculty that is a reference in its field of work, as well as in its field of study. Professionals who have worked on many application development projects and who will provide the student with all their knowledge. This will facilitate the implementation of their own initiatives in the future.

Our faculty will directly relate the European Data Protection Regulation (GDPR) to the software so that the legal technicalities are properly understood"

Management

Dr. Olalla Bonal, Martín

» Technical sales blockchain specialist in 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

Dr. Villamizar Lamus, Christian Alfonso

- » Senior Digital Architect at Banco Santander
- » Digital architect at KPMG in a cloud banking platform project
- » Lead Digital Project Specialist at Deloitte Greece
- » Technical architect at Everis and NTT Data with projects at Telefónica de España, Securitas Direct, Grupo Santillana, Bankia, Banco Bilbao Vizcaya, FCC and ASISA
- » Telecommunications Engineer, University Santo Tomás, Bucaramanga, Colombia
- » Specialist in declarative programming and programming engineering from the Polytechnic University of Valencia

04
Structure and Content

The Postgraduate Certificate in Blockchain and Big Data in Software Engineering begins by detailing software applications in information technologies, as well as project management and methodologies. It is then introduced to the development of an application. Detailing different programming languages for the frontend and architectures, servers and languages for the backend. It also delves into data warehousing, container management and testing. To conclude, software-oriented blockchain, software for Big Data, Artificial Intelligence and IoT and security are unpacked.

Throughout the program you will work with React, a Javascript library designed to create application interfaces on a single page"

Module 1. Blockchain and Big Data in Software Engineering

05
Methodology

This academic program offers students a different way of learning. Our methodology uses a cyclical learning approach: **Relearning.**
This teaching system is used, for example, in the most prestigious medical schools in the world, and major publications such as the **New England Journal of Medicine** have considered it to be one of the most effective.

Discover Relearning, a system that abandons conventional linear learning, to take you through cyclical teaching systems: a way of learning that has proven to be extremely effective, especially in subjects that require memorization"

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.

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

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.

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%
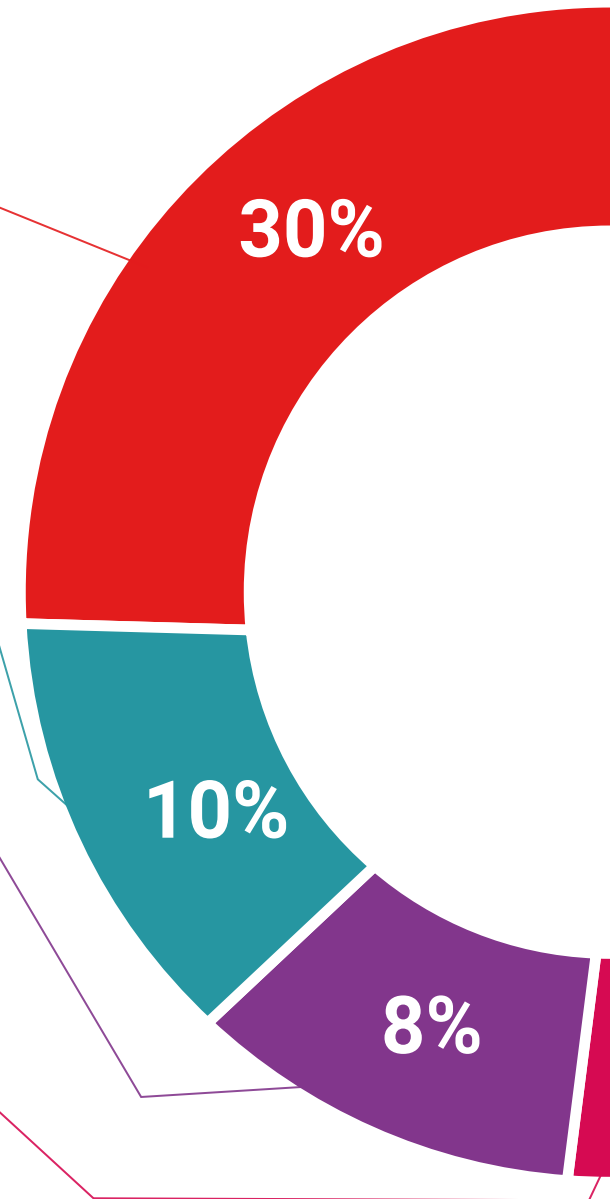
Case Studies

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 Blockchain and Big Data in Software Engineering 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"
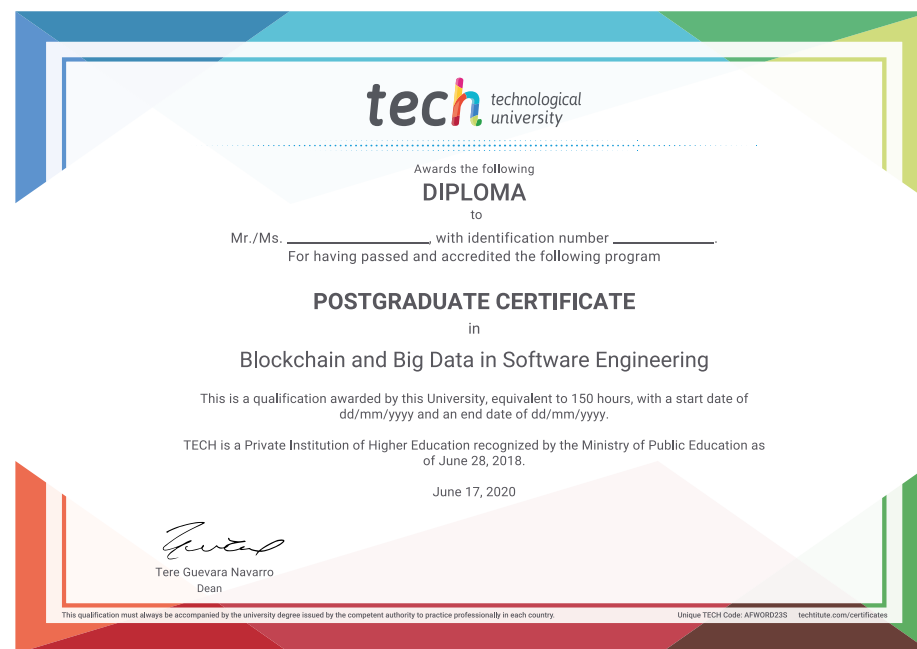
This **Postgraduate Certificate in Blockchain and Big Data in Software Engineering** contains the scientific most complete and update program on the market

After you have passed the evaluations, you will receive your corresponding by **Postgraduate Certificate** issued by **TECH Technological University** ia tracked delivery*.

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

Title: **Postgraduate Certificate in Blockchain and Big Data in Software Engineering**

Official N° of hoursv **150 h.**

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Awards the following
DIPLOMA
to
Mr./Ms. _____, with identification number _____.
For having passed and accredited the following program

POSTGRADUATE CERTIFICATE
in
Blockchain and Big Data in Software Engineering

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

This qualification must always be accompanied by the university degree issued by the competent authority to practice professionally in each country. 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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