

# Postgraduate Certificate Public Blockchain Development: Ethereum, Stellar and Polkadot



## Postgraduate Certificate Public Blockchain Development: Ethereum, Stellar and Polkadot

- » 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/public-blockchain-development-ethereum-stellar-](http://www.techtitute.com/pk/information-technology/postgraduate-certificate/public-blockchain-development-ethereum-stellar-)

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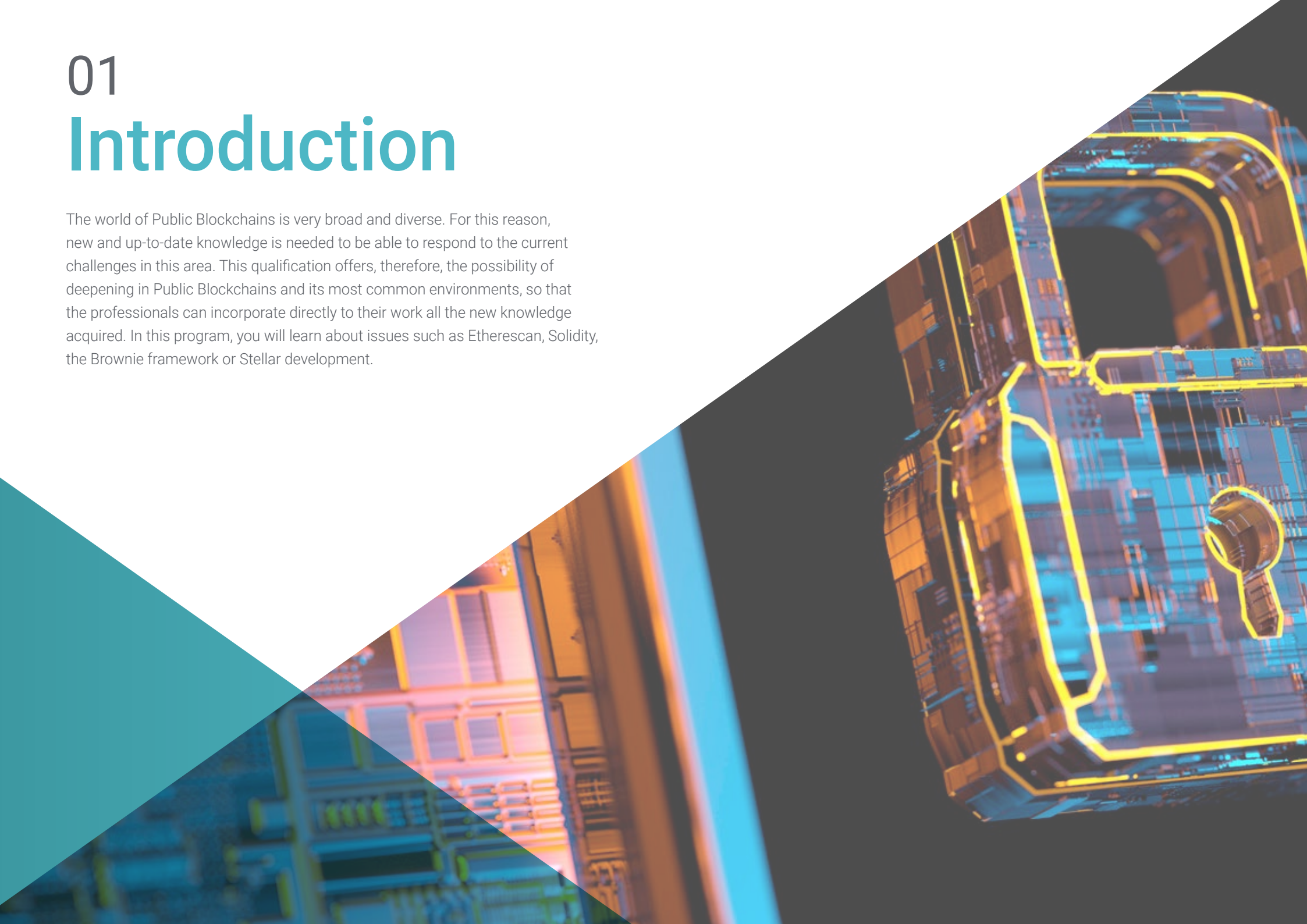
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# 01

# Introduction

The world of Public Blockchains is very broad and diverse. For this reason, new and up-to-date knowledge is needed to be able to respond to the current challenges in this area. This qualification offers, therefore, the possibility of deepening in Public Blockchains and its most common environments, so that the professionals can incorporate directly to their work all the new knowledge acquired. In this program, you will learn about issues such as Etherscan, Solidity, the Brownie framework or Stellar development.



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*In this Postgraduate Certificate you will be able to go deeper into Ethereum, Stellar and Polkadot, so that you will become a true specialist in Public Blockchains”*

In Blockchain technology there are private and public environments. The latter, due to their great extension and variety, are very complex, so they require constant updating by the computer scientist, engineer or programmer. Therefore, this Postgraduate Certificate in Public Blockchain Development: Ethereum, Stellar and Polkadot offers the latest tools to perform in this area, so that the professional who completes it can create, program and manage all types of projects in Public Blockchains.

This qualification contains a specialized syllabus that delves into issues such as Ganache for Ethereum, token creation, the deployment and validation process, integration with Polkadot or ERC20, among many others. As a result, by mastering these elements, the computer scientist will be able to create Public Blockchain initiatives with great potential.

All this, following TECH's innovative online teaching methodology, which allows students to balance their professional and academic life, while accessing numerous multimedia teaching resources such as practical exercises, master classes or interactive summaries. Additionally, you will enjoy the accompaniment of top-level faculty who know all the ins and outs of Ethereum, Polkadot and Stellar.

The **Postgraduate Certificate in Public Blockchain Development: Ethereum, Stellar and Polkadot** contains the most complete and up-to-date program on the market. The most important features include:

- ◆ The development of practical cases presented by Public Blockchain experts
- ◆ The graphic, schematic, and practical contents with which they are created, provide scientific and practical information on the 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 work
- ◆ Content that is accessible from any fixed or portable device with an internet connection



*To develop Blockchain projects you need to know Ethereum in depth. This qualification gives you the opportunity to do this quickly and easily”*

“

*This program will introduce you to the main advantages of combining Ethereum, Stellar and Polkadot tools. Enroll now and get access to the best content on Public Blockchains”*

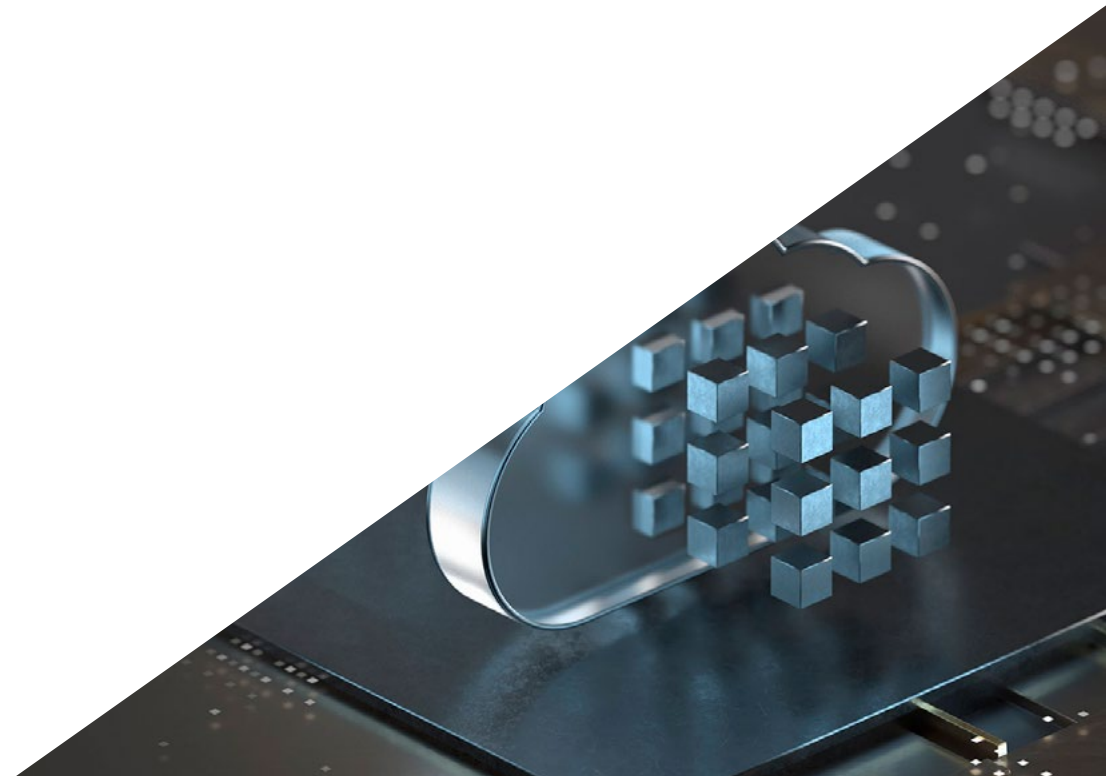
*Public Blockchains are complex and varied. Don't miss the new developments in this area and enroll.*

*Blockchain technology has multiple applications. Specialize in Public Blockchains and advance professionally.*

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 professionals must try to solve the different professional practice situations that arise throughout the program. For this purpose, students will be assisted by an innovative, interactive video system created by renowned and experienced experts.









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*Specialize in Public Blockchains and become an essential professional in your environment”*



## General Objectives

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- ◆ Generate specialized knowledge about Ethereum as a public Blockchain
- ◆ Examine the Stellar platform
- ◆ Specialize computer engineers in Polkadot and Substrate
- ◆ Analyze the future impact of development on public blockchains

“

*Don't wait any longer: your goals will be within your reach once you know all the keys to Ethereum”*





## Specific Objectives

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- ◆ Broaden skills in the world of Blockchain development
- ◆ Develop practical examples based on cases
- ◆ Compile generic knowledge about blockchains in practice
- ◆ Analyze the operation of a public Blockchain
- ◆ Gain experience in Solidity
- ◆ Establish a relationship between the different public Blockchains.
- ◆ Create a project on a public Blockchain



# 03

## Course Management

To guide the student throughout the learning process in this complex and exciting world, we have a first-class teaching staff. This teaching staff is composed of great experts in Public Blockchains, especially in Ethereum, Stellar and Polkadot, and will transmit to the professional who completes this qualification the most important elements to develop in this revolutionary and changing field.

The background of the slide features a blurred screenshot of a website, likely related to Polkadot. The word "Polka" is prominently displayed in a large, bold, black font. Below it, a blue badge with white text reads "Rank #6". To the right of the badge, the word "Coin" is partially visible. The overall image has a halftone or dithered texture, giving it a digital, pixelated appearance. The background is divided into geometric shapes: a white triangle at the top left, a teal triangle at the bottom left, and a grey triangle at the bottom right.



Coins > Polkado

adot DOT

in 268,746 watchlist

“

*TECH offers you the best specialists to enjoy a first level learning in the field of Public Blockchains”*

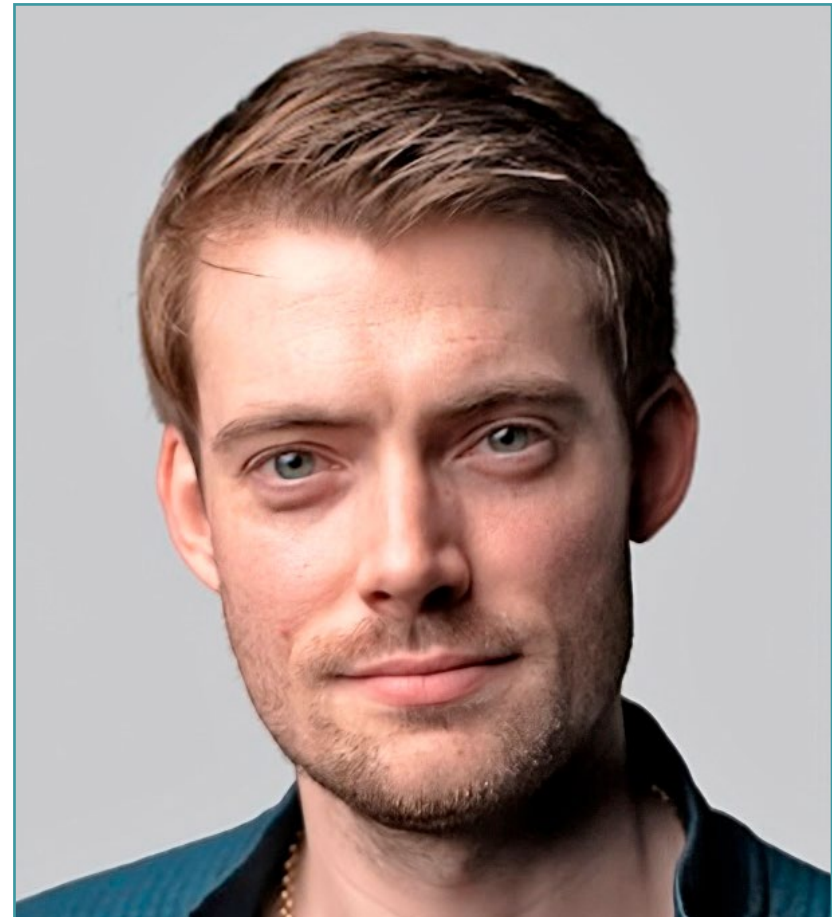
## International Guest Director

Chris Sutton is a leading professional with extensive experience in the field of technology and finance, specializing in the Blockchain area. In fact, he has held the senior position of Director of the Blockchain and Digital Assets Department at Mastercard. In addition, he has been the Founder of the consulting firm N17 Capital, in which he offers advice to companies in the field of Blockchain and digital assets. So, one of his functions has been to identify the components that make up these new tools, analyze them and create working strategies.

His professional experience has included high-level roles in leading companies in the sector, such as Oasis Pro Market, where he has performed duties as Director of Blockchain Services. In addition, he has worked as Mergers and Acquisitions Product Manager at Cisco, and as Product Manager at IBM. These positions have allowed him to stand out internationally for his ability to lead teams, develop innovative strategies and manage large-scale projects.

Throughout his career, he has participated in important technological and financial events. In this sense, Chris Sutton has given presentations and has been part of international panels, along with other leading experts in this sector. In this way, on the occasion of the 15th anniversary of the white paper on Bitcoin, he participated in the events of the FinTech week in Hong Kong. He also presented his expertise at a conference organized by Mastercard in Dubai on banking in the digital age and the impact of digital assets. Likewise, his analyses have focused on delving into the history, principles and future of the Blockchain.

In short, his strategic vision and outstanding skills in programming and algorithms have been key to his success in the international market, consolidating him as a leader in his field.



## D. Sutton, Chris

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- Director of Blockchain and Digital Assets at Mastercard, Miami, U.S.A.
- Founder of N17 Capital
- Director of Blockchain Services at Oasis Pro Market
- Mergers and Acquisitions Product Manager at Cisco
- Product Manager at IBM
- Contributor at Cointelegraph
- Master's degree in Financial Systems Engineering from University College London
- Bachelor's Degree in Computer Science from Florida International University

“

*Thanks to TECH, you will be able to learn with the best professionals in the world”*

## Management



### Mr. Torres Palomino, Sergio

- ♦ Blockchain Architect Telefónica
- ♦ Blockchain Architect Signeblock
- ♦ Blockchain Developer Blocknitive
- ♦ Big Data Engineer Golive Services
- ♦ Big Data Engineer IECISA
- ♦ 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

## Professors

### Mr. Triguero Tirado, Enrique

- ♦ Blockchain Infrastructure Technical Manager at UPC-Threepoints
- ♦ Chief Technical Officer at Ilusiak
- ♦ Project Management Officer at Ilusiak and Deloitte
- ♦ ELK Engineer at Everis
- ♦ Systems Architect at Everis
- ♦ Degree in Technical Engineering in Computer Systems at the Polytechnic University of Valencia
- ♦ Master's Degree in Blockchain and its Business Applications from ThreePoints and the Polytechnic University of Valencia

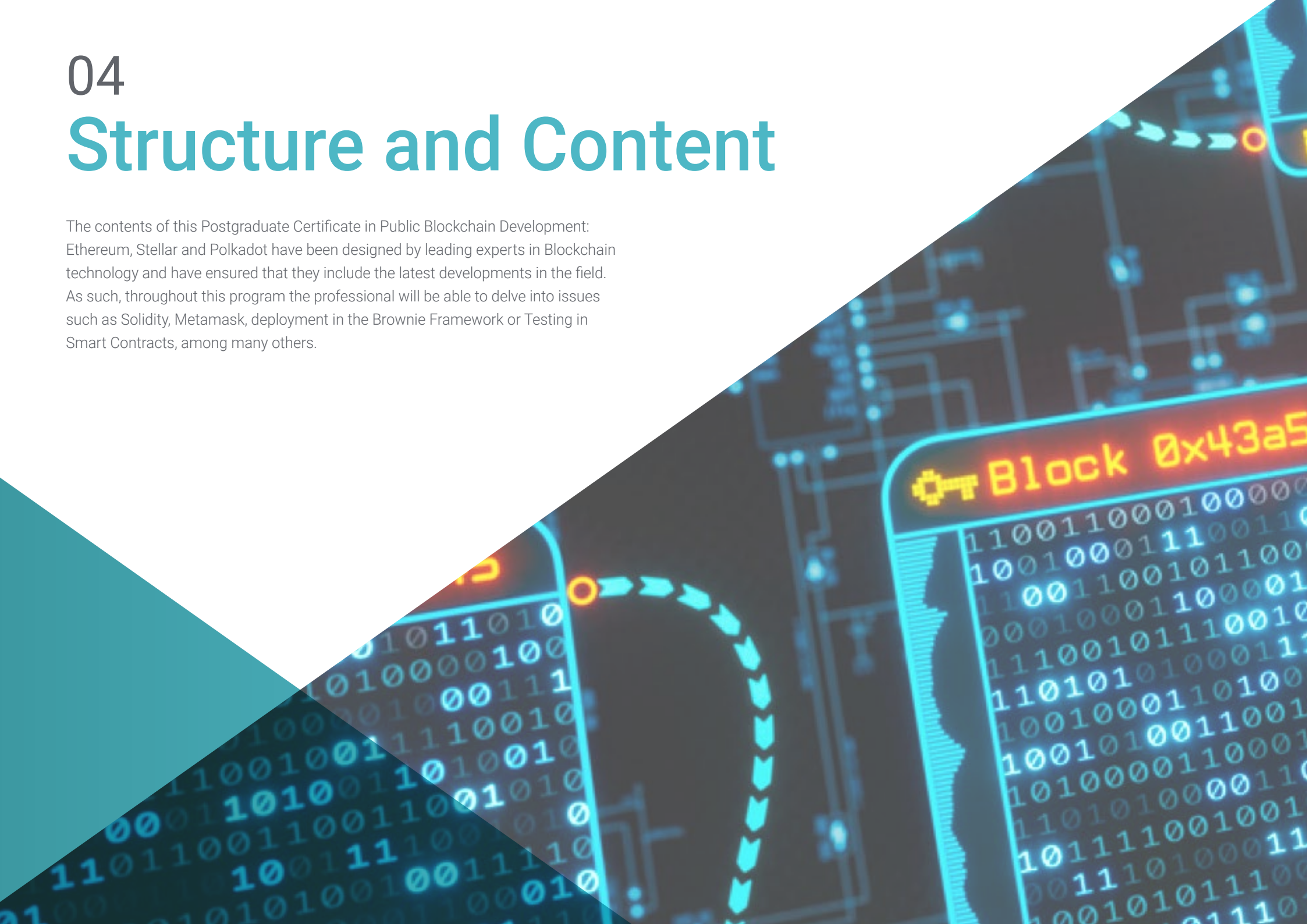




# 04

# Structure and Content

The contents of this Postgraduate Certificate in Public Blockchain Development: Ethereum, Stellar and Polkadot have been designed by leading experts in Blockchain technology and have ensured that they include the latest developments in the field. As such, throughout this program the professional will be able to delve into issues such as Solidity, Metamask, deployment in the Brownie Framework or Testing in Smart Contracts, among many others.





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*Get to know Stellar in depth and learn about all the possibilities offered by this powerful tool"*

## Module 1. Public Blockchain Development: Ethereum, Stellar and Polkadot

- 1.1. Ethereum. Public Blockchain
  - 1.1.1. Ethereum
  - 1.1.2. EVM and GAS
  - 1.1.3. Etherscan
- 1.2. Running Ethereum: Solidity
  - 1.2.1. Solidity
  - 1.2.2. Remix
  - 1.2.3. Compilation and Execution
- 1.3. Ethereum Framework: Brownie
  - 1.3.1. Brownie
  - 1.3.2. Ganache
  - 1.3.3. Brownie Deployment
- 1.4. Testing Smart Contracts
  - 1.4.1. Test Driven Development (TDD)
  - 1.4.2. Pytest
  - 1.4.3. Smart Contracts
- 1.5. Web Connection
  - 1.5.1. Metamask
  - 1.5.2. Web3.js
  - 1.5.3. Ether.js
- 1.6. Real Project: Fungible Token
  - 1.6.1. ERC20
  - 1.6.2. Creating Our Token
  - 1.6.3. Deployment and Validation
- 1.7. Stellar Blockchain
  - 1.7.1. Stellar Blockchain
  - 1.7.2. Ecosystem
  - 1.7.3. Compared to Ethereum







- 1.8. Programming Stellar
  - 1.8.1. Horizon
  - 1.8.2. Stellar SDK
  - 1.8.3. Fungible Token Project
- 1.9. Polkadot Project
  - 1.9.1. Polkadot Project
  - 1.9.2. Ecosystem
  - 1.9.3. Interacting with Ethereum and Other Blockchains
- 1.10. Programming Polkadot
  - 1.10.1. Substrate
  - 1.10.2. Creating Parachain on Substrate
  - 1.10.3. Polkadot Integration



*Public Blockchains will no longer be a mystery to you when you finish this qualification”*

# 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"*

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

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

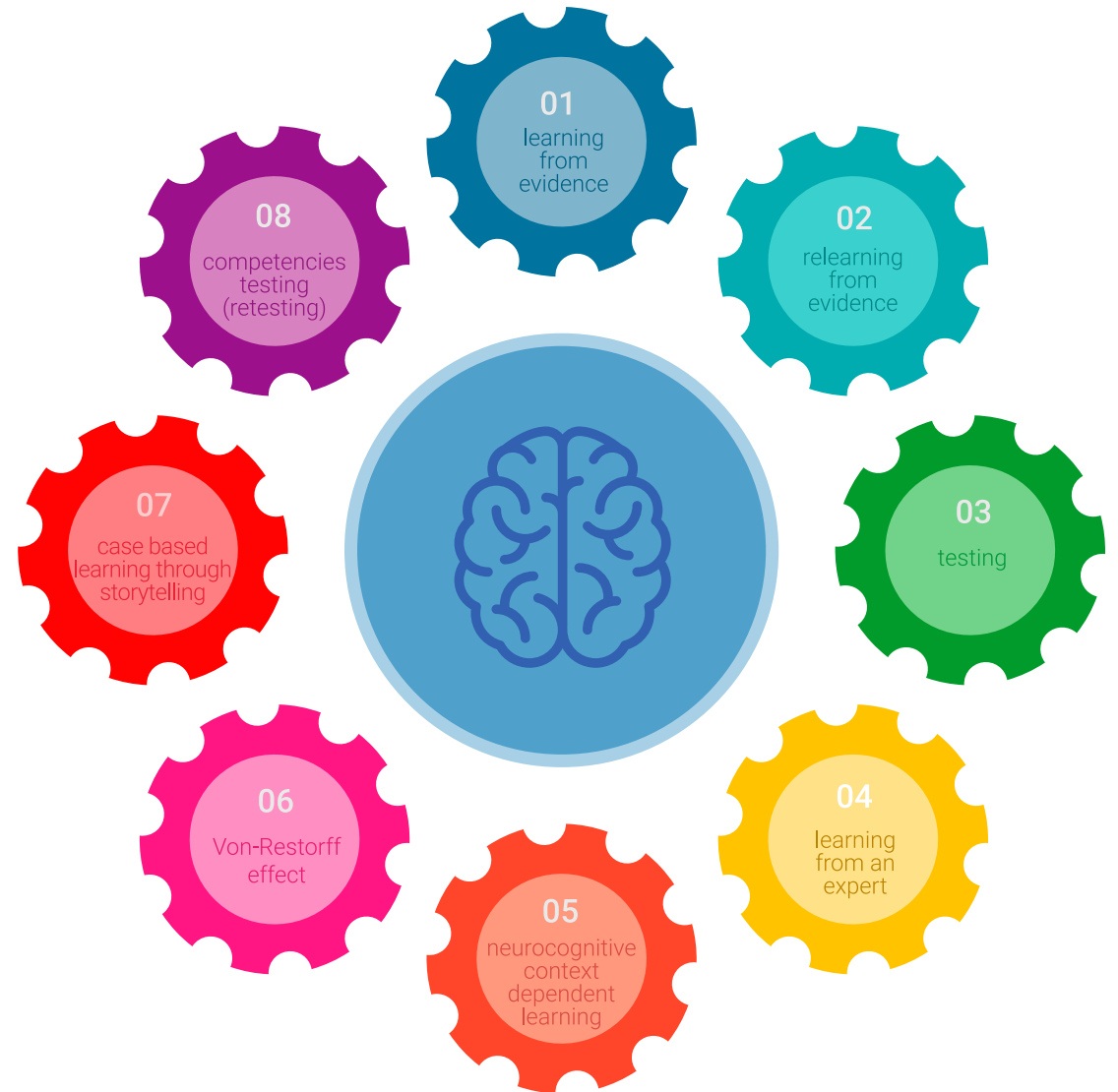
TECH effectively combines the Case Study methodology with a 100% online learning system based on repetition, which combines different teaching elements in each lesson.

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.



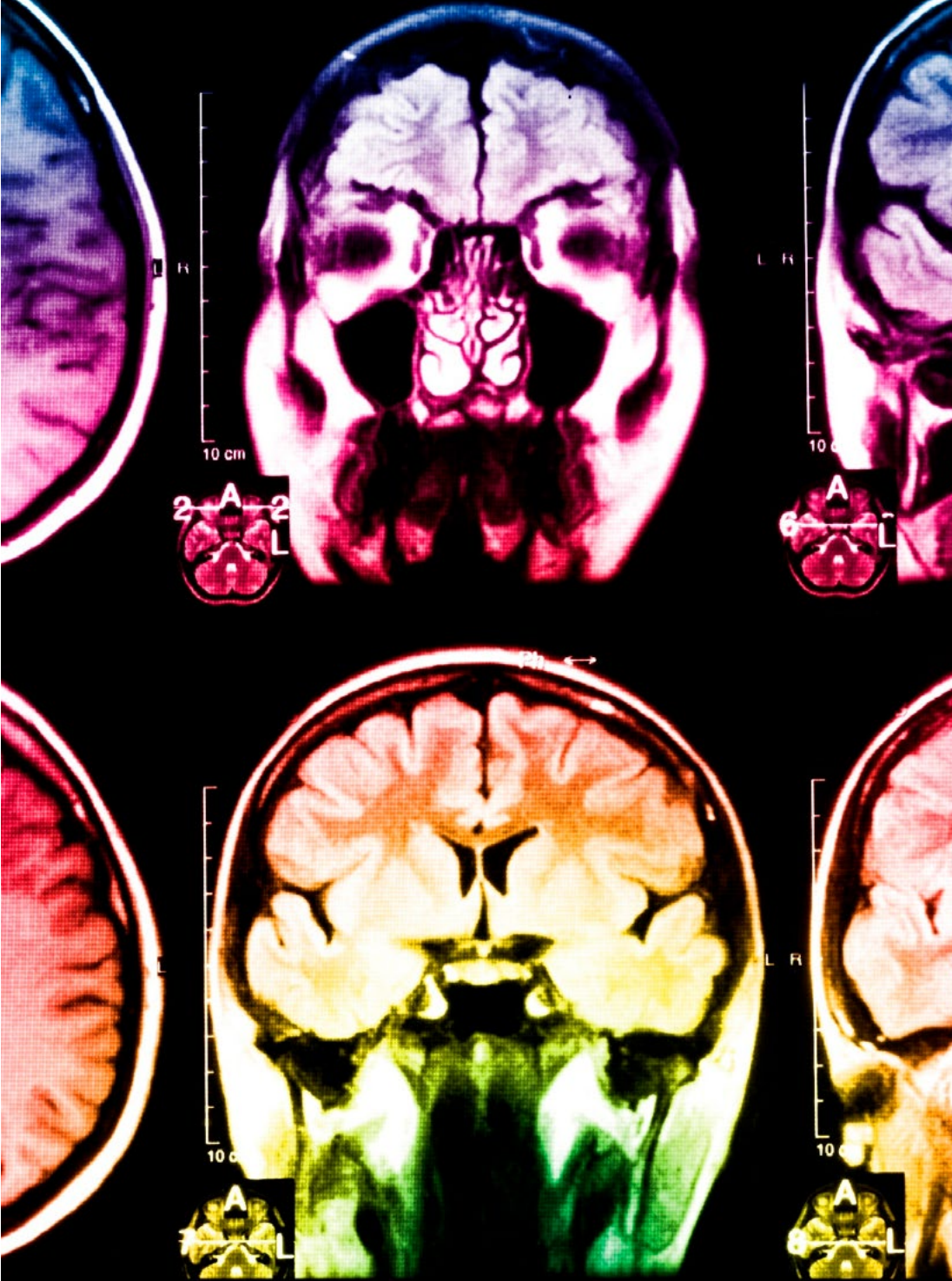
In our program, learning is not a linear process, but rather a spiral (learn, unlearn, forget, and re-learn). Therefore, we combine each of these elements concentrically.

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 adapted in 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 that we are experiencing.

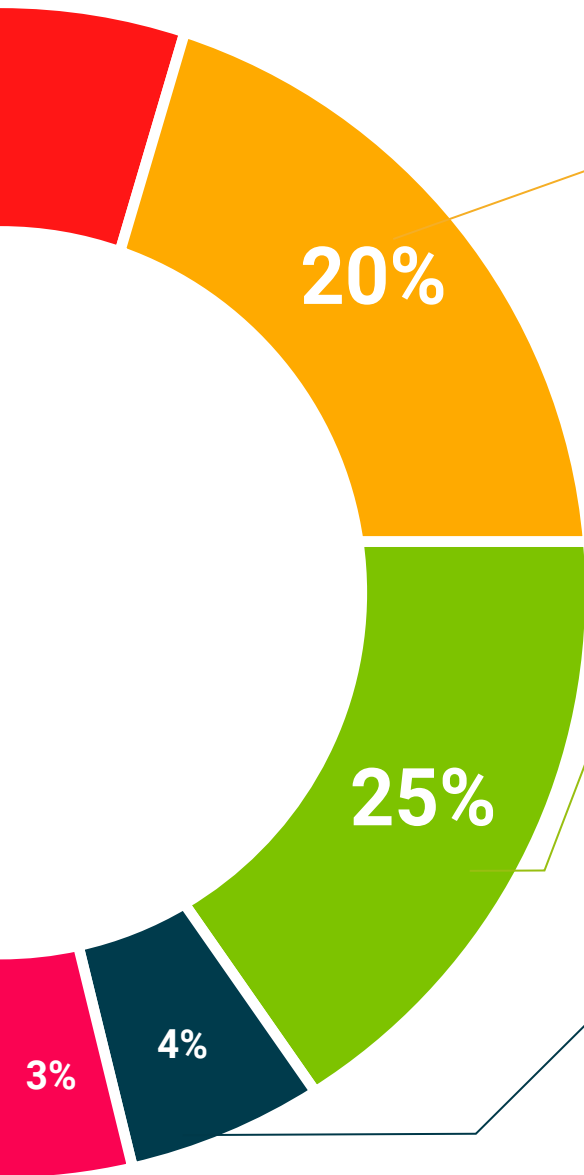


### Additional Reading

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.







#### 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 Certificate in Public Blockchain Development: Ethereum, Stellar and Polkadot guarantees students, in addition to the most rigorous and up-to-date education, access to a qualification issued by TECH Technological University.



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



This **Postgraduate Certificate in Public Blockchain Development: Ethereum, Stellar and Polkadot** 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 Public Blockchain Development: Ethereum, Stellar and Polkadot**

Official N° of Hours: **150 h.**



\*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.

future  
health confidence people  
education information tutors  
guarantee accreditation teaching  
institutions technology learning  
community commitment  
personalized service innovation  
knowledge present  
development language  
virtual classroom



## Postgraduate Certificate Public Blockchain Development: Ethereum, Stellar and Polkadot

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# Postgraduate Certificate

Public Blockchain

Development: Ethereum,  
Stellar and Polkadot