



Postgraduate Diploma Blockchain Technology

Language: English
Course Modality: Online
Duration: 6 months

Certificate: TECH Technological University

Teaching Hours: 450 h.

Target Group: University Graduates who have previously completed any of the qualifications in the fields of Social and Legal Sciences, Administrative and Business Sciences. In addition, to managers interested in the area of market analytics and digital economic consulting.

 $We b site: {\color{blue}www.techtitute.com/in/school-of-business/postgraduate-diploma/postgraduate-diploma-blockchain-technology}$

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Certificate

01 **Welcome**

The use of decentralized blockchain operations for Bitcoin and Ethereum mining has become a highly demanded job in the market. And the fact is that it is an activity that favors security and provides greater transparency to the entity that carries it out, without forgetting the very high levels of speed and efficiency that characterize it. Based on this and taking into account the degree of employability that exists in this field, TECH has developed a qualification aimed at comprehensively training its graduates to master Blockchain technology and succeed in the crypto-economy sector. This is a 100% online experience that will elevate your entrepreneurial talent to the top thanks to the specialized knowledge of the main protocols and strategies of decentralized digital finance today.









tech 08 | Why Study at TECH?

At TECH Technological University



Innovation

The university offers an online learning model that combines the latest educational technology with the most rigorous teaching methods. A unique method with the highest international recognition that will provide students with the keys to develop in a rapidly-evolving world, where innovation must be every entrepreneur's focus.

"Microsoft Europe Success Story", for integrating the innovative, interactive multi-video system.



The Highest Standards

Admissions criteria at TECH are not economic. Students don't need to make a large investment to study at this university. However, in order to obtain a qualification from TECH, the student's intelligence and ability will be tested to their limits. The institution's academic standards are exceptionally high...

95%

of TECH students successfully complete their studies



Networking

Professionals from countries all over the world attend TECH, allowing students to establish a large network of contacts that may prove useful to them in the future.

100,000+

200+

executives trained each year

different nationalities



Empowerment

Students will grow hand in hand with the best companies and highly regarded and influential professionals. TECH has developed strategic partnerships and a valuable network of contacts with major economic players in 7 continents.

500+

collaborative agreements with leading companies



Talent

This program is a unique initiative to allow students to showcase their talent in the business world. An opportunity that will allow them to voice their concerns and share their business vision.

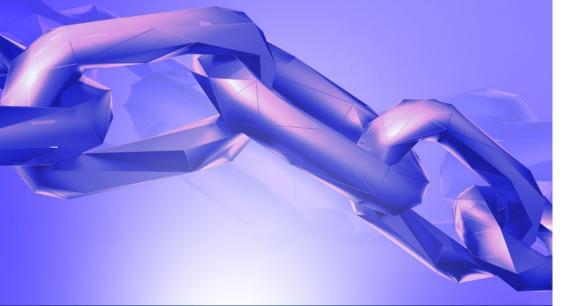
After completing this program, TECH helps students show the world their talent.



Multicultural Context

While studying at TECH, students will enjoy a unique experience. Study in a multicultural context. In a program with a global vision, through which students can learn about the operating methods in different parts of the world, and gather the latest information that best adapts to their business idea.

TECH students represent more than 200 different nationalities.



Learn with the best

In the classroom, TECH's teaching staff discuss how they have achieved success in their companies, working in a real, lively, and dynamic context. Teachers who are fully committed to offering a quality specialization that will allow students to advance in their career and stand out in the business world.

Teachers representing 20 different nationalities.



At TECH you will have access to Harvard Business School case studies"

Why Study at TECH? | 09 tech

TECH strives for excellence and, to this end, boasts a series of characteristics that make this university unique:



Analysis

TECH explores the student's critical side, their ability to question things, their problem-solving skills, as well as their interpersonal skills.



Academic Excellence

TECH offers students the best online learning methodology. The university combines the Relearning methodology (the most internationally recognized postgraduate learning methodology) with Harvard Business School case studies. A complex balance of traditional and state-of-the-art methods, within the most demanding academic framework.



Economy of Scale

TECH is the world's largest online university. It currently boasts a portfolio of more than 10,000 university postgraduate programs. And in today's new economy, **volume + technology = a ground-breaking price**. This way, TECH ensures that studying is not as expensive for students as it would be at another university.





tech 12 | Why Our Program?

This program will provide students with a multitude of professional and personal advantages, particularly the following:



A significant career boost

By studying at TECH, students will be able to take control of their future and develop their full potential. By completing this program, students will acquire the skills required to make a positive change in their career in a short period of time.

70% of participants achieve positive career development in less than 2 years.



Develop a strategic and global vision of companies

TECH offers an in-depth overview of general management to understand how each decision affects each of the company's different functional areas.

Our global vision of companies will improve your strategic vision.



Consolidate the student's senior management skills

Studying at TECH means opening the doors to a wide range of professional opportunities for students to position themselves as senior executives, with a broad vision of the international environment.

You will work on more than 100 real senior management cases.



Take on new responsibilities

The program will cover the latest trends, advances and strategies, so that students can carry out their professional work in a changing environment.

45% of graduates are promoted internally.



Access to a powerful network of contacts

TECH connects its students to maximize opportunities. Students with the same concerns and desire to grow. Therefore, partnerships, customers or suppliers can be shared.

You will find a network of contacts that will be instrumental for professional development.



Thoroughly develop business projects

Students will acquire a deep strategic vision that will help them develop their own project, taking into account the different areas in companies.

20% of our students develop their own business idea.



Improve soft skills and management skills

TECH helps students apply and develop the knowledge they have acquired, while improving their interpersonal skills in order to become leaders who make a difference.

Improve your communication and leadership skills and enhance your career.



Be part of an exclusive community

Students will be part of a community of elite executives, large companies, renowned institutions, and qualified professors from the most prestigious universities in the world: the TECH Technological University community.

We give you the opportunity to train with a team of world renowned teachers.



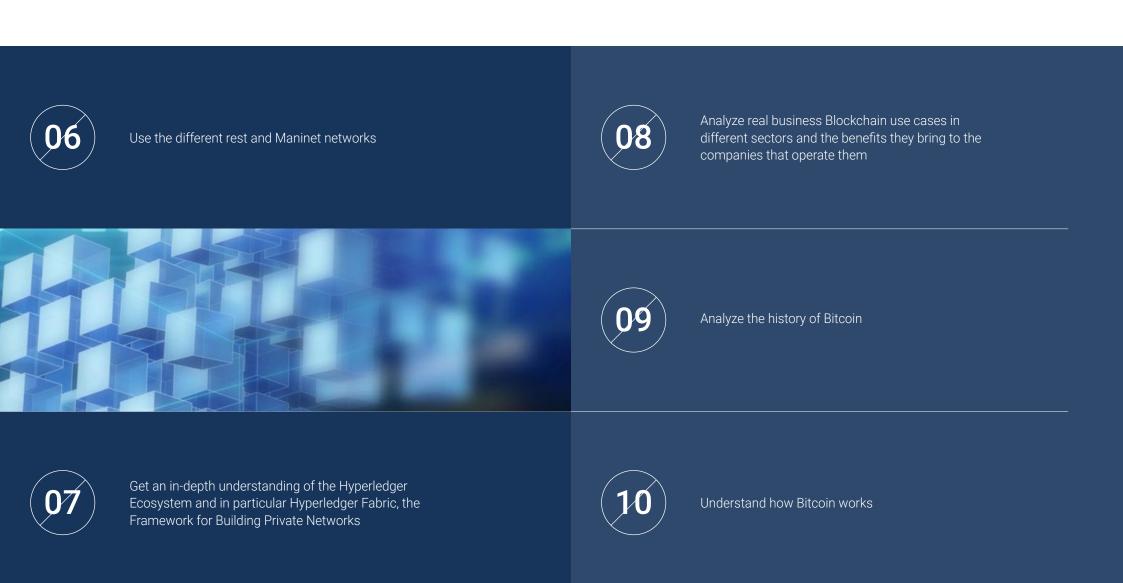


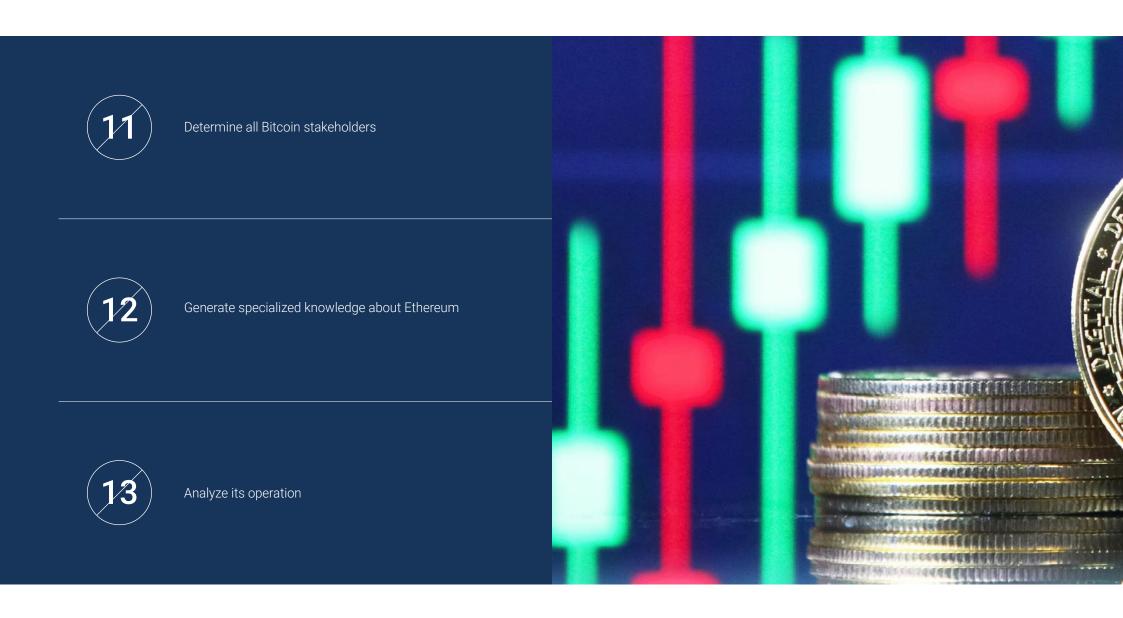
tech 16 | Objectives

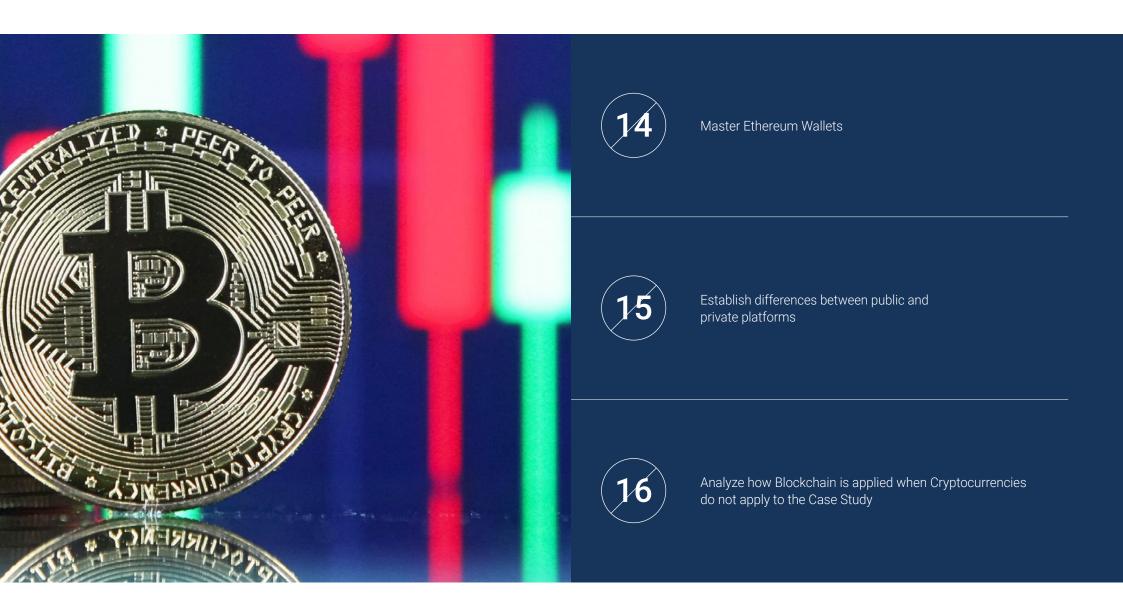
TECH makes the goals of their students their own goals too. Working together to achieve them.

The **Postgraduate Diploma in Blockchain Technology** will enable the student to:

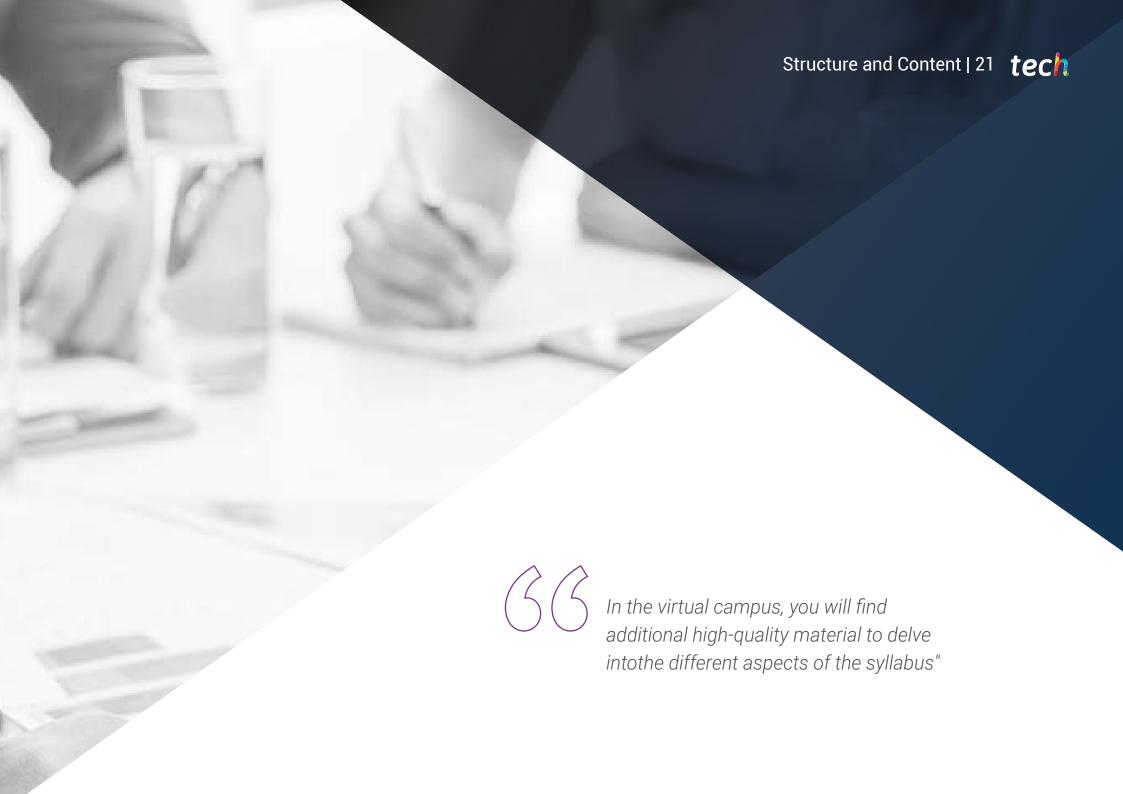












tech 22 | Structure and Content

Syllabus

For the development of the syllabus of this Postgraduate Diploma, TECH has asked the teaching team to select the information it considers essential to specialize in the field of Blockchain Technology through a qualification that is 100% online. Thanks to this, it has been possible to shape an academic experience based on the latest developments in cryptoeconomics and focused on Bitcoin and Ethereum management.

Throughout the 6 months of this program, the graduate will have access to 450 hours of the best theoretical, practical and additional content with which he will be able to delve into the different types of transactions that exist in the current market of digital assets, as well as the installation of the most used Wallets for mining Bitcoins. In addition, you will delve into the creation of Hyperledger ecosystems of Hyperledger ecosystems of Hyperledger ecosystems through mastering the Framework par excellence: Fabrication.

Thanks to this, you will be able to develop as a true specialist in this field, through the acquisition of the most exhaustive knowledge, as well as the improvement of your professional skills. In addition, you will be able to include in your resume a qualification endorsed by a great university such as TECH, which will make you stand out in any recruitment process and achieve even your most ambitious professional goals.

This program takes place over 6 months and is divided into 3 modules:

Module 1. Bitcoin. Origin of Cryptoeconomics

Module 2. Ethereum: DeFi Basis

Module 3. Enterprise Blockchain



Where, When and How is it Taught?

TECH offers the possibility of taking this Postgraduate Diploma in Blockchain Technology completely online. Throughout the 6 months of the educational program, you will be able to access all the contents of this program at any time, allowing you to self-manage your study time.

A unique, key, and decisive educational experience to boost your professional development and make the definitive leap.

tech 24 | Structure and Content

2.9. Oracles

2.9.1. The Oracles2.9.2. Oracle Types2.9.3. Oracle Analysis

Module 1. Bitcoin. Origin of Cryptoeconomics								
1.1. Bitcoin Fundamentals1.1.1. Bitcoin1.1.2. Bitcoin White Paper1.1.3. How Bitcoin Works	1.2. Bitcoin Addresses1.2.1. Bitcoin Address Generation1.2.2. Bitcoin Address Types1.2.3. Smart Contracts in Bitcoin	1.3. P2P Networks1.3.1. P2P Networks1.3.2. P2P Bitcoin Networks1.3.3. Use of P2P Networks in Crypto Projects	1.4. Game Theory1.4.1. Game Theory1.4.2. Bitcoin Gaming Applicability1.4.3. Main Games Applied in the Real World					
 1.5. Consensus Model 1.5.1. Consensus Models in Distributed Systems 1.5.2. Bitcoin Consensus 1.5.3. BIP Analysis (Bitcoin Improvement Proposals) 	1.6. Bitcoin Mining1.6.1. Bitcoin Mining1.6.2. Current Bitcoin Mining Model1.6.3. Mining Farms	1.7. Transactions. Types1.7.1. Bitcoin Transactions1.7.2. Blockchain Traceability1.7.3. Block Explorers	1.8. Nodes Types1.8.1. Bitcoin Nodes1.8.2. Full Node Uses. Best Practices1.8.3. Full Nodes vs. Light Nodes					
1.9. Bitcoin Wallets1.9.1. Types of Wallets1.9.2. Use of Bitcoin Wallets1.9.3. Security in the use of Wallets	1.10. Other Bitcoin Uses 1.10.1. Bitcoin as Data Repository 1.10.2. DeFi with Bitcoin 1.10.3. Bitcoin as Digital Notary							
Module 2. Ethereum: DeFi Basis								
2.1. Ethereum Basics2.1.1. Ethereum2.1.2. Ethereum Yellow paper2.1.3. How Ethereum Works	2.2. Smart Contracts2.2.1. Analysis of the Main Smart Contracts2.2.2. Ethereum Deployment2.2.3. Smart Contracts in DeFi	2.3. Tokens2.3.1. ERC20 Tokens2.3.2. Tokens ERC720 (NFT Tokens)2.3.3. Other Token Standards	2.4. Consensus Model2.4.1. Ethereum Consensus2.4.2. Ethereum from POW to POS2.4.3. POW Impact on DeFi					
2.5. Ethereum Networks 2.5.1. Main Net 2.5.2. Test Net 2.5.3. Private Net	2.6. Ethereum Programming2.6.1. Available Compilers2.6.2. Solidity Applied to DeFi2.6.3. Ganache and its Utilities	2.7. Ethereum Components2.7.1. Ethereum Virtual Machine2.7.2. Accounts and Addresses2.7.3. Ether the DeFi Currency	2.8. Ethereum DAO and DAPP 2.8.1. DAO 2.8.2. DAPP 2.8.3. Main DAPP in DeFi					

2.10. Ethereum Wallets

2.10.1. Types of Ethereum Wallets 2.10.2. Metamask 2.10.3. Advanced Use of DeFi Wallets

Mod	Module 3. Enterprise Blockchain						
3.1.1. 3.1.2. 3.1.3.	1 2	3.2.2.	Hyperledger, Enterprise Blockchain Platform Hyperledger Ecosystem Hyperledger Fabric Community. Hyperledger Labs	3.3. 3.3.1. 3.3.2. 3.3.3.	Blockchain-Based Consortia and Joint Ventures	3.4.1. 3.4.2.	Traceability BlockchainTraceability Immutability and GDPR Conflict Legal Validity
3.5. 3.5.1. 3.5.2. 3.5.3.	Blockchain Certification	3.6. 3.6.1. 3.6.2. 3.6.3.	Pharmaceutical Industry	3.7.2.	Corda Quorum Hyperledger Besu	3.8. 3.8.1. 3.8.2. 3.8.3.	Risks: Case Studies by Sector Blockchain in Banking Blockchain in Retail Blockchain in the Public Sector
3.9. 3.9.1. 3.9.2. 3.9.3.	Private Network Consensus BFT / IBFT Raft Granpa (Polkadot/Substrate)	3.10.1 3.10.2	Blockchain Vs. Centralized Databases vs. Decentralized Databases Differences Similarities The Best Technological Alternative Choice				



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.





tech 28 | Methodology

TECH Business School uses the 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.





This program prepares you to face business challenges in uncertain environments and achieve business success.



Our program prepares you to face new challenges in uncertain environments and achieve success in your career.

A learning method that is different and innovative

This TECH program is an intensive educational program, created from scratch to present executives with challenges and business decisions at the highest level, whether at the national or international level. 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 business reality is taken into account.



You will learn, through collaborative activities and real cases, how to solve complex situations in real business environments"

The case method has been the most widely used learning system among the world's leading business 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 we face in the case method, an action-oriented learning method. Throughout the program, the studies will be presented with multiple real cases. They must integrate all their knowledge, research, argue and defend their ideas and decisions.

tech 30 | Methodology

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.

Our online system will allow you to organize your time and learning pace, adapting it to your schedule. You will be able to access the contents from any device with an internet connection.

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 online business school is the only one in the world licensed to incorporate 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.



Methodology | 31 tech

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. With this methodology we have 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, markets, and financial 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 specialization, developing a critical mindset, defending arguments, and contrasting opinions: a direct equation to 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.

tech 32 | Methodology

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.



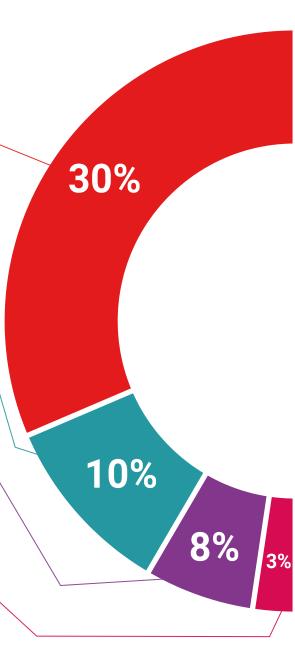
Management Skills Exercises

They will carry out activities to develop specific executive competencies in each thematic area. Practices and dynamics to acquire and develop the skills and abilities that a high-level manager 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.





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 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.

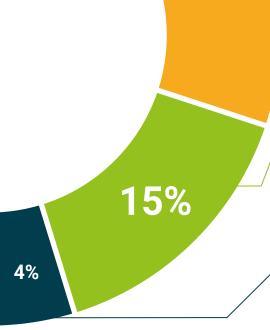


This exclusive educational system for presenting multimedia content was awarded by Microsoft as a "European Success Story".

Testing & Retesting

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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.

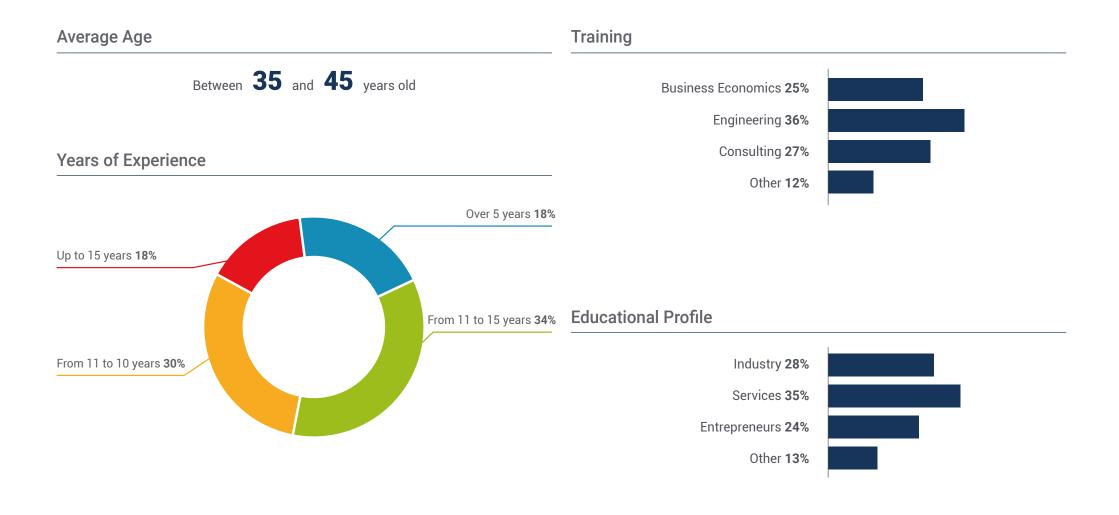


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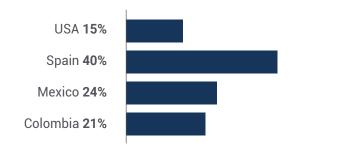




tech 36 | Our Students' Profiles



Geographical Distribution





Ricardo Fuentes

Technological Engineer and Bitcoin Expert

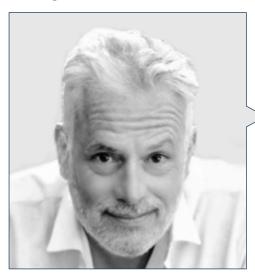
"Thanks to this Postgraduate Diploma, I have been able to improve, considerably, my skills in the management of Blockchain technology. Based on it, I have undertaken my own business project based on Hyperledger Fabric, which has helped me to progress in the crypto environment and to achieve very high profits based on secure DeFi strategies and with which I have reduced the risk to a minimum"





tech 40 | Course Management

Management



Dr. Gil de la Guardia, Alberto

- Founding member of Le Crypto Club
- Co-director of several university programs related to Blockchain Technology and the Crypto world
- Doctorate in International Public Law at the Complutense University of Madrid
- Degree in Law from the University of Salamanca
- Master's Degree in Financial Studies from San Pablo CEU University
- Master's Degree in Blockchain Technology and Bitcoin from the European University of Madrid





Professors

Mr. Martín Arenas, Carlos

- Blockchain Architect and Developer at Esferize
- Architect and Blockchain developer at Transfesa Logistics
- Blockchain Developer and Consultant at Sopra Steria
- Founding partner of ADNBLOCK
- Superior Technician in Computer Applications Development by Joyfe College.
- Expert in Bitcoin and Blockchain programming by UEM

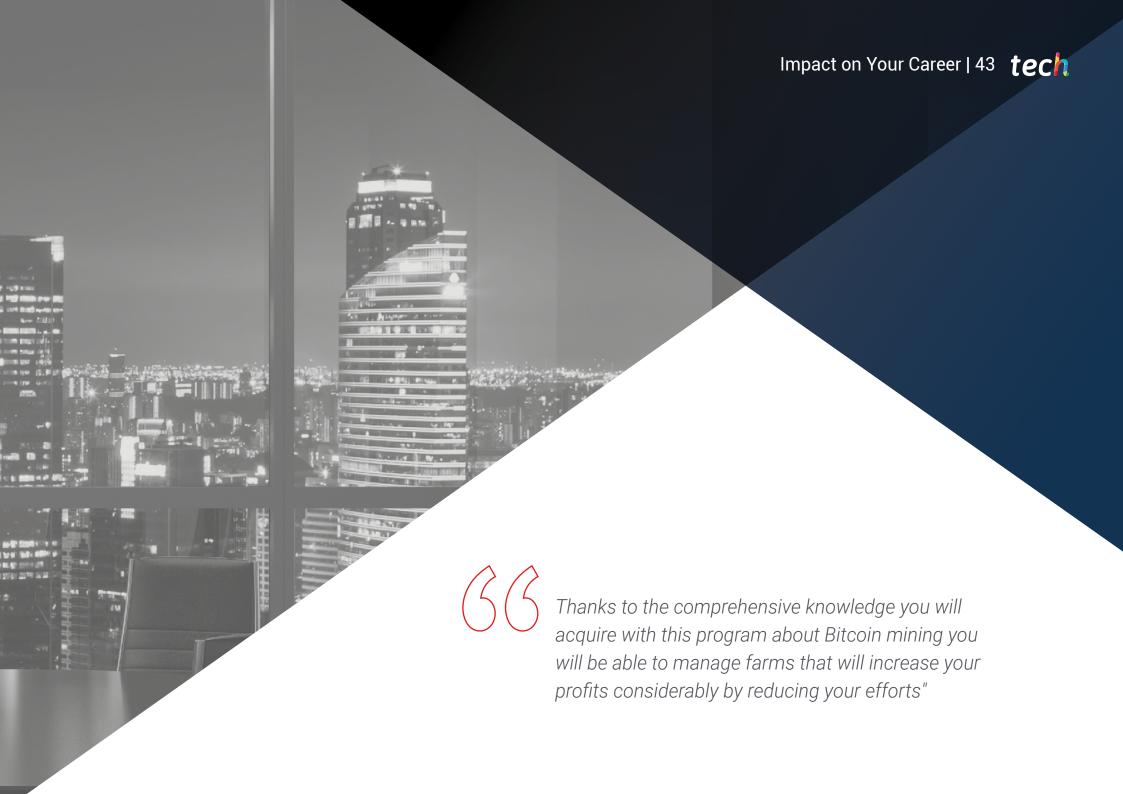
Mr. Martín Arenas, Daniel

- Blockchain Developer at Dimática Software Development
- Developer Blockchain and Consultant at Sopra Steria
- Programmer at Cibernos
- Founding partner of ADNBLOCK
- Superior Technician in Computer Applications Development by Joyfe College
- Master's Degree in Blockchain Technology and Bitcoin from the European University of Madrid
- Professional Certificate in Software Development from the IES Melchor Gaspar de Jovellanos High School

Mr. Fernández Belando, David

- Founding partner of ADNBLOCK
- IBM Blockchain Essentials
- IBM Blockchain. Foundation Developer
- Bitcoin and Blockchain Expert at Universidad Europea de Madrid
- Information Technology Engineer from the Universidad Nacional de Educación a Distancia (National University of Distance Education)





tech 44 | Impact on Your Career

You will master
Hyperledger ecosystems
and the quintessential
Framework for building
excellent private networks
within the enterprise
Blockchain framework.

Are you ready to take the leap? Excellent professional development awaits you.

TECH's Postgraduate Diploma in Blockchain Technology is an intensive program that prepares the professional to face challenges and business decisions in the field of cryptoeconomics and digital assets. The main objective is to promote personal and professional growth. Helping students achieve success.

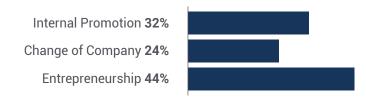
If you want to improve yourself, make a positive change at a professional level and network with the best, TECH is the place for you.

A qualification designed to help you hone your management skills in the crypto arena, which will benefit you with a significant salary increase.

Time of Change



Type of change



Salary increase

The completion of this program represents a salary increase of more than **27.42%** for our students.

Salary before

\$58,300

A salary increase of

27.42%

Salary after

\$74,200





tech 48 | Benefits for Your Company

Developing and retaining talent in companies is the best long-term investment.



Growth of talent and intellectual capital

The professional will introduce the company to new concepts, strategies, and perspectives that can bring about significant changes in the organization.



Retaining high-potential executives to avoid talent drain

This program strengthens the link between the company and the professional and opens new avenues for professional growth within the company.



Building agents of change

You will be able to make decisions in times of uncertainty and crisis, helping the organization overcome obstacles.



Increased international expansion possibilities

Thanks to this program, the company will come into contact with the main markets in the world economy.







Project Development

The professional can work on a real project or develop new projects in the field of R&D or Business Development of your company.



Increased competitiveness

This Postgraduate Diploma will equip your professionals with the skills to take on new challenges and therefore drive the organization forward.





tech 52 | Certificate

This **Postgraduate Diploma in Blockchain Technology** 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 certificate 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 Blockchain Technology
Official N° of Hours: **450 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.



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