

# Master's Degree Cryptocurrency Trading



## Master's Degree Cryptocurrency Trading

- » Modality: online
- » Duration: 12 months
- » Certificate: TECH Global University
- » Credits: 60 ECTS
- » Schedule: at your own pace
- » Exams: online

Website: [www.techtitute.com/us/information-technology/master-degree/master-cryptocurrency-trading](http://www.techtitute.com/us/information-technology/master-degree/master-cryptocurrency-trading)

# Index

01

Introduction

---

*p. 4*

02

Objectives

---

*p. 8*

03

Skills

---

*p. 14*

04

Course Management

---

*p. 18*

05

Structure and Content

---

*p. 22*

06

Methodology

---

*p. 32*

07

Certificate

---

*p. 40*

# 01

# Introduction

The buying and selling of cryptocurrencies on the digital market has become an activity that generates millions of dollars every month. Trading a single Bitcoin can be worth more than \$20,000. However, it is a process that requires a broad and specialized knowledge of exchange strategies for its acquisition, so as to operate for the benefit of the investor. For this reason, TECH Global University and its team of digital economy and IT experts have developed a comprehensive program through which those interested in this field will be able to delve into the creation of wallets, as well as the keys to DeFi through 1,500 hours of theoretical and practical content 100% online. A unique opportunity to enter the growing market of digital assets through an academic experience based on the immediate topicality of cryptoeconomics and Blockchain.



MAKE



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*The best program on today's academic market for immediate and beneficial entry into Cryptoeconomics, through a 100% online academic experience"*

It is no secret that the cryptocurrency market generates millions of dollars every year. However, the speculation arising from their purchase and sale has shaken the pillars of the economy of many countries, as well as that of thousands of people who have invested in them to get hold of digital assets such as Bitcoins or Ethereum. This is a complex area in which, thanks to cryptographic encryption that guarantees ownership and ensures the integrity of transactions, it has been possible to create decentralized finance in which there are no intermediaries due to the use of Blockchain technology.

It is, therefore, a sector in which IT professionals are quite well suited. Based on this, and in order to provide you with all the information that will allow you to enter the world of Cryptoeconomics and its intricacies, TECH Global University and its team of experts have developed this Master's Degree in Cryptocurrency Trading. This is a theoretical-practical program, through which students will be able to delve into the origin and characteristics of the crypto environment, as well as the basis of the main digital assets. In addition, it will delve into DeFi protocols, and the development of financial strategies adapted to the new business models in the digital market.

All this, 100% online and over 1,500 hours of the best content, which includes additional high-quality material with which students can contextualize the information developed throughout the syllabus and deepen, in a personalized way, in the aspects they consider most relevant for their professional development. It is, therefore, a unique academic opportunity to enter a booming industry that will elevate your career as a cryptocurrency computer scientist to the top of the field.

This **Master's Degree in Cryptocurrency Trading** contains the most complete and up-to-date program on the market. The most important features include:

- ◆ The development of case studies presented by experts in Digital Business and IT
- ◆ 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



*If you are looking for a course that will help you master Bitcoin wallet creation, this PROGRAM is perfect for you"*

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*You will delve into Ethereum fundamentals, as well as its performance and financial strategies to get the most out of its trading”*

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.

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 education programmed to learn 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.

*Would you like to delve into the fundamentals of centralized versus decentralized economics? With this program you will have dozens of hours of diverse material to do so.*

*The perfect program to get up to date on new banking from wherever you want, without schedules or on-site classes.*



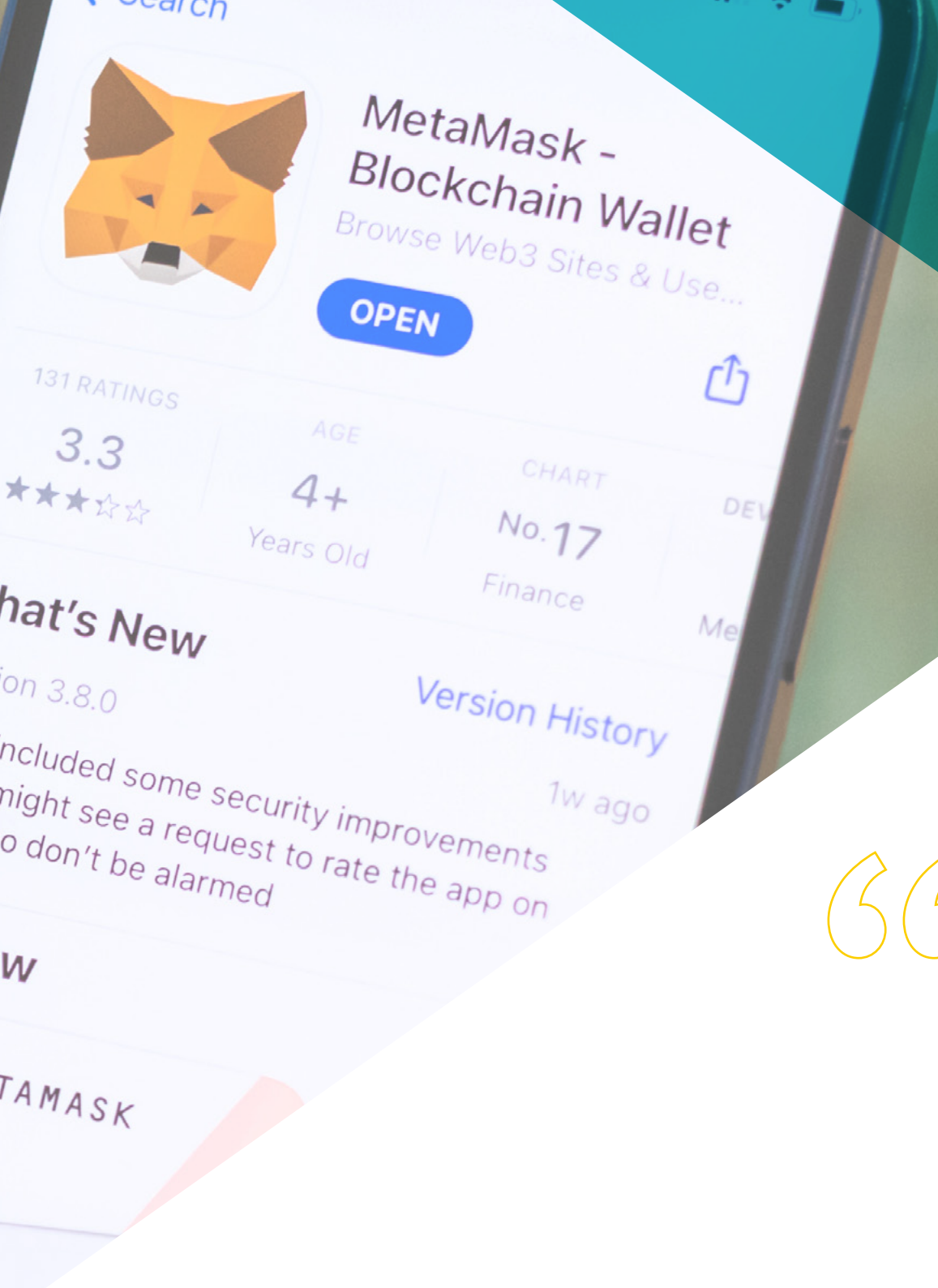


# 02 Objectives

The boom in the Crypto environment and the increasing demand for professionals in the field of Information Technology who master its intricacies, as well as strategies to carry out secure and highly profitable transactions, is the reason why TECH Global University has considered necessary the development of this program to be necessary. Therefore, the objective is to provide students with all the information they need to master, in just 12 months, this sector and be able to immerse themselves in successful projects that will elevate their careers to the highest level.







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*If your goals include the successful launch of a crypto project, this program is perfect for you. What are you waiting for? Enroll now!"*



## General Objectives

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- ◆ Analyze the history of Bitcoin
- ◆ Understand how Bitcoin works
- ◆ Determine all Bitcoin stakeholders
- ◆ Generate specialized knowledge about Ethereum
- ◆ Analyze its operation
- ◆ Master Ethereum wallets
- ◆ Analyze DeFi advantages
- ◆ Understand how it works
- ◆ Perform DeFi project analysis
- ◆ Analyze the most used DeFi analysis tools
- ◆ Generate specialized knowledge on the most widely used DeFi technology
- ◆ Familiarize yourself with the most relevant DeFi protocols in the crypto ecosystem
- ◆ Understand money and the key difference between fiat and crypto
- ◆ Learn how to value a Blockchain Tokenomics
- ◆ Become familiar with wallets and web 3
- ◆ Establish differences between public and private platforms
- ◆ Analyze how Blockchain is applied when cryptocurrencies do not apply to the case study
- ◆ Analyze the main Defi protocols
- ◆ Substantiate its operation
- ◆ Identify the main market movements
- ◆ Examine and propose investment entries and exits
- ◆ Evaluate and develop investment strategies
- ◆ Establish the basis for crypto world compliance
- ◆ Analyze existing regulations
- ◆ Establish parameters to initiate projects with legal certainty
- ◆ Evaluate privacy within Blockchain technology
- ◆ Identify legal security in existing projects
- ◆ Determine the basic principles of crypto-asset security
- ◆ Examine the main threats in cyberspace
- ◆ Discover best practices for crypto asset custody



## Specific Objectives

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### Module 1. Bitcoin: The Birth of Cryptoeconomics

- ◆ Distinguish the different directions and types of transactions
- ◆ Determine the different uses of Bitcoin in the real world
- ◆ Installing and setting up the most used Bitcoin Wallets

### Module 2. Ethereum. DeFi Basis

- ◆ Deploy Smart Contracts
- ◆ Distinguish the different Token standards
- ◆ Use the different test and Mainnet networks

### Module 3. DeFi Ecosystem

- ◆ Examine the potential uses of DeFi
- ◆ Generate specialized knowledge on Loan Borrowing and Lending
- ◆ Analyze Banking Services
- ◆ Master decentralized Marketplaces
- ◆ Developing the operation of DeFi smart contracts
- ◆ Address the present and future challenges of decentralized finance

### Module 4. DeFi Protocol Analysis

- ◆ Examine DeFi protocol characteristics
- ◆ Establish DeFi architecture
- ◆ Analyze financial, technical, operational and emerging risks
- ◆ Analyze decision-making policies





### Module 5. Cryptoeconomics

- ◆ Evaluate a decentralized governance model and its obstacles
- ◆ Conduct an analysis of identified risks
- ◆ Generate specialized knowledge on consumer and investor protection
- ◆ Examine the effectiveness and impact on monetary policy
- ◆ Determine financial instability risks
- ◆ Analyze criminal activity
- ◆ Assess environmental impact

### Module 6. Corporate Blockchain

- ◆ Get an in-depth understanding of the Hyperledger ecosystem and in particular Hyperledger Fabric, the framework for building private networks
- ◆ Analyze real business Blockchain use cases in different sectors and the benefits they bring to the companies that operate them

### Module 7. New Crypto Business Models protocols

- ◆ Apply protocols based on their case study
- ◆ Analyze different strategies
- ◆ Create your own diversified portfolio

### Module 8. Investment Strategy Analysis

- ◆ Analyze each potential investment candidate in a technical (graphs) and fundamental (projects) manner
- ◆ Examine trading strategies based on market trends
- ◆ Generate data reports of operations that with mathematical indicators allow entering and exiting at the right time







- ◆ Support strategies through analytical explanations
- ◆ Establish trend movements that verify whether we are in bull or bear markets
- ◆ Demonstrate, through resistances and supports, the trend lines of the markets

#### **Module 9. Compliance Regulations and Crypto Privacy**

- ◆ Apply Blockchain compliance
- ◆ Determine the regulatory standards that apply to the DLT
- ◆ Demonstrate the importance of regulation to ensure project security
- ◆ Analyze the importance of privacy and data configuration in block transactions
- ◆ Obtain the basic authorizations to start projects
- ◆ Examine project confidence parameters

#### **Module 10. Cryptocurrency and Blockchain Security**

- ◆ Analyze factors affecting cryptocurrency security
- ◆ Determine the main types of threats to the assets
- ◆ Learn to trace all movements of our cryptocurrencies



*A program designed to help you achieve even your highest expectations through an immersive academic experience that is highly beneficial to your professional development”*

# 03 Skills

Each of the programs offered by TECH Global University has been carefully designed, not only to provide students with all the information they need to specialize in a particular sector, but also to enable them to perfect their skills in that field. For this reason, computer scientists who access this Master's Degree will be able to work intensively on the comprehensive improvement of their skills related to the management of digital assets within decentralized finance.



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*You will master the main strategies  
and protocols for dealing with risks  
in decentralized finance 2.0”*

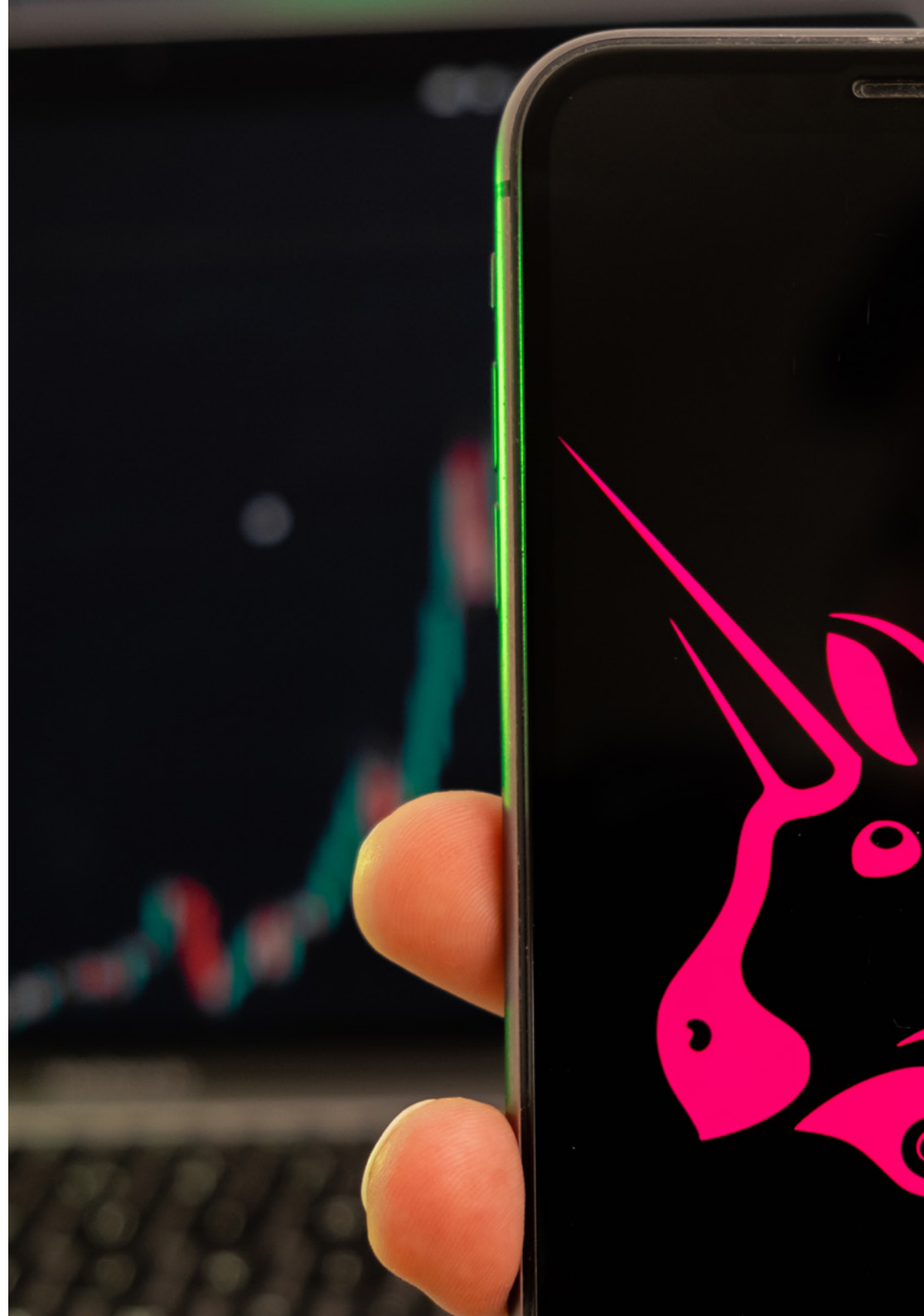




## General Skills

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- ◆ Manage the use of wallets
- ◆ Manage all Ethereum environments
- ◆ Master the DeFi ecosystem
- ◆ Determine the risks of operating on DeFi protocols
- ◆ Understand the risks and opportunities of the new Cryptoeconomics
- ◆ Determine how integration with other technologies brings added value
- ◆ Be able to create a Portfolio What is the body image you would like to have
- ◆ Compile and demonstrate previous movements that will serve as a basis for future investments
- ◆ Propose systems that guarantee the efficiency of investments, cutting losses and maximizing profits
- ◆ Determine the basic rules for presenting potential projects







## Specific Skills

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- ◆ Develop advanced knowledge of how wallets work
- ◆ Install and set up metamask as a wallet
- ◆ Establish the differences between DeFi and Open Banking
- ◆ Master DeFi's legal regulations
- ◆ Determine cryptocurrency investment audiences
- ◆ Substantiate the importance of document digitization and Blockchain certification and how to carry it out with distributed tools such as IPFS
- ◆ Categorize tokens applicable to projects
- ◆ Implement key internet security measures for cryptoassets



*A unique academic experience that will allow you, in just 12 months, to master the new crypto business models through the exhaustive handling of DEX protocols"*

# 04

# Course Management

TECH Global University considers it extremely important to employ professionals specialized in this field. Therefore, for this Master's Degree in Cryptocurrency Trading, TECH has selected a faculty versed in consulting and Blockchain, with extensive experience in the digital asset market. In addition, they are successful entrepreneurs who have taken their projects to the highest level, so students will be able to learn, in-depth, their successful strategies and apply them in their own field.



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*The teaching staff will be at your disposal to answer any questions you may have during the course of the program through the Virtual Campus”*

## 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
- 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
- Degree in Law from the University of Salamanca



## 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
- ◆ Blockchain Developer 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)

### Mr. Gómez García, Fernando

- ◆ DEYDE Data Quality Infrastructure Manager
- ◆ Systems and Security Administrator at IDEGroup
- ◆ Nutrytec Laboratorios S.A. Systems Manager
- ◆ Systems analyst at AT LEAST S.A
- ◆ Professor of Blockchain Technology in various higher education programs
- ◆ Bitcoin and Blockchain Expert Postgraduate Degree by the EU European University
- ◆ Advanced Course in Security Management by the Universidad Rey Juan Carlos
- ◆ Degree in Computer Engineering from the Distance University of Madrid

### Mr. Montalvo Aguilera, Hermógenes

- ◆ Consultant and legal advisor in Blockchain, legal smart contracts and enterprise tokenization
- ◆ Lawyer expert in Compliance, Blockchain and Tokenomics by Esade Business School
- ◆ Cybersecurity Course
- ◆ Master's Degree in Law from the Universidad Oberta de Catalunya
- ◆ Master's Degree in Blockchain by Tutellus
- ◆ Graduate in Law from the Universidad Oberta de Catalunya

# 05

# Structure and Content

The design of this Master's Degree has been carried out by the teaching staff, being specialists in cryptoeconomics, they know the latest developments related to successful strategies and the most appropriate protocols to use in each case. In addition, the Relearning methodology has been applied for content development, for which TECH Global University is a pioneer. This is a pedagogical strategy that consists of reiterating the most important concepts throughout the syllabus, so that students receive an academic experience in which they do not have to spend extra hours memorizing, but rather acquire knowledge in a natural and progressive manner.





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*In the Virtual Campus you will find a multitude of additional high quality material in which you can customize the aspects you consider most important for your professional development”*



## Module 1. Bitcoin: The Birth of Cryptoeconomics

- 1.1. Bitcoin Fundamentals
  - 1.1.1. Bitcoin
  - 1.1.2. Bitcoin White Paper
  - 1.1.3. How Bitcoin Works
- 1.2. Bitcoin Addresses
  - 1.2.1. Bitcoin Address Generation
  - 1.2.2. Bitcoin Address Types
  - 1.2.3. Smart Contracts in Bitcoin
- 1.3. P2P Networks
  - 1.3.1. P2P Networks
  - 1.3.2. P2P Bitcoin Networks
  - 1.3.3. Use of P2P Networks in Crypto Projects
- 1.4. Game Theory
  - 1.4.1. Game Theory
  - 1.4.2. Bitcoin Gaming Applicability
  - 1.4.3. 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 Mining
  - 1.6.1. Bitcoin Mining
  - 1.6.2. Current Bitcoin Mining Model
  - 1.6.3. Mining Farms
- 1.7. Transactions: Types
  - 1.7.1. Bitcoin Transactions
  - 1.7.2. Blockchain Traceability
  - 1.7.3. Block Explorers
- 1.8. Nodes: Types
  - 1.8.1. Bitcoin Nodes
  - 1.8.2. Full Node Uses. Best Practices
  - 1.8.3. Full Nodes vs. Light Nodes

- 1.9. Bitcoin Wallets
  - 1.9.1. Types of Wallets
  - 1.9.2. Use of Bitcoin Wallets
  - 1.9.3. 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 Fundamentals
  - 2.1.1. Ethereum
  - 2.1.2. Ethereum Yellow paper
  - 2.1.3. How Ethereum Works
- 2.2. Smart Contracts
  - 2.2.1. Analysis of the Main Smart Contracts
  - 2.2.2. Ethereum Deployment
  - 2.2.3. Smart Contracts in DeFi
- 2.3. Tokens
  - 2.3.1. ERC20 Tokens
  - 2.3.2. ERC720 Tokens (NFT tokens)
  - 2.3.3. Other Token Standards
- 2.4. Consensus Model
  - 2.4.1. Ethereum Consensus
  - 2.4.2. Ethereum from POW to POS
  - 2.4.3. 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 Programming
  - 2.6.1. Available Compilers
  - 2.6.2. Solidity Applied to DeFi
  - 2.6.3. Ganache and its Uses

- 2.7. Ethereum Components
  - 2.7.1. Ethereum Virtual Machine
  - 2.7.2. Accounts and Addresses
  - 2.7.3. Ether the DeFi Currency
- 2.8. Ethereum DAOs and DAPPs
  - 2.8.1. DAOs
  - 2.8.2. Dapps
  - 2.8.3. Main DAPPs in DeFi
- 2.9. Oracles
  - 2.9.1. The Oracles
  - 2.9.2. Oracle Types
  - 2.9.3. Oracle Analysis
- 2.10. Ethereum Wallets
  - 2.10.1. Types of Ethereum Wallets
  - 2.10.2. Metamask
  - 2.10.3. Advanced Use of DeFi Wallets

### Module 3. DeFi Ecosystem

- 3.1. Decentralized Finance or DeFi Concept
  - 3.1.1. Financial Ecosystems
  - 3.1.2. DeFi solutions: Transparency and Open Source
  - 3.1.3. Dapps and Peer to Peer Concept
- 3.2. Main DeFi Networks
  - 3.2.1. DeFi Stack on Ethereum
  - 3.2.2. Polkadot
  - 3.2.3. Other DeFi Networks
- 3.3. Centralized and Decentralized Market Makers
  - 3.3.1. Centralized vs. Decentralized
  - 3.3.2. MakerDao
  - 3.3.3. Work Environments or Frameworks

- 3.4. Centralized vs. Decentralized Economy
  - 3.4.1. Centralized Theories
  - 3.4.2. Decentralized Theories
  - 3.4.3. Case Studies and Scenarios
- 3.5. Yield Farming
  - 3.5.1. Decentralized Profitability
  - 3.5.2. Yield Farming Case Studies
  - 3.5.3. Project Analysis
- 3.6. Liquidity Mining
  - 3.6.1. Liquidity Mining Benefits
  - 3.6.2. Yield Farming Differences
  - 3.6.3. Project Analysis
- 3.7. Collateralization as a Guaranty Principle
  - 3.7.1. Collateralization
  - 3.7.2. Best Collateralization Projects
  - 3.7.3. Guarantees as Assets to Be Made Profitable
- 3.8. Leverage
  - 3.8.1. When to Use Leverage?
  - 3.8.2. Differences between Leverage and Collateralization
  - 3.8.3. Leverage and Volatility
- 3.9. Current Financial System and CBDCs
  - 3.9.1. Central Banks and Cryptos
  - 3.9.2. State Cryptocurrencies or CBDCs
  - 3.9.3. Future Scenario Theories
- 3.10. Asset Tokenization
  - 3.10.1. Real Estate Assets
  - 3.10.2. Works of Art
  - 3.10.3. Creative Capacity as a Source of Wealth
  - 3.10.4. Management of New Financial Instruments

## Module 4. DeFi Protocol Analysis

- 4.1. Stablecoins
  - 4.1.1. Stablecoin Impact on the DeFi Ecosystem
  - 4.1.2. Stablecoins PEGGED
  - 4.1.3. Algorithmic Stablecoins
  - 4.1.4. Terra's Failure
- 4.2. Decentralized Exchanges
  - 4.2.1. Principles of AACS
  - 4.2.2. Uniswap
  - 4.2.3. SushiSwap
  - 4.2.4. Balancer
- 4.3. DeFi Interchain Applications
  - 4.3.1. A Multichain Future
  - 4.3.2. Layer 2
  - 4.3.3. Layer 2 Limitations
  - 4.3.4. CrossChain (Bridges)
- 4.4. ParaChain DeFi and Bridges Applications
  - 4.4.1. Oracles
  - 4.4.2. Cosmos and Polkadot (ICC)
  - 4.4.3. Limitations of Creating Your Own Blockchain
  - 4.4.4. Omnichain
- 4.5. Loans, Collateralization and Interest
  - 4.5.1. Lending Crypto
  - 4.5.2. Collateralization
  - 4.5.3. Fixed Interest Rate
  - 4.5.4. Aave and Compound
  - 4.5.5. DeFi for Good
- 4.6. DeFi Insurance
  - 4.6.1. How DeFi Insurance Works
  - 4.6.2. Relevant DeFi Insurance Protocols
  - 4.6.3. KYC Insurance





- 4.7. NFTs and DeFi
  - 4.7.1. NFT Characteristics in DeFi
  - 4.7.2. NFT Structure
  - 4.7.3. Collateralization
  - 4.7.4. Marketplaces
- 4.8. DeFi Analysis Tools
  - 4.8.1. DeFi Protocol Analysis
  - 4.8.2. Main DeFi Analysis Tools
  - 4.8.3. Best Practices for Interpreting Information
- 4.9. Metaverse and Blockchain
  - 4.9.1. The Ultimate DeFi Application
  - 4.9.2. NFTs as Virtual Properties
  - 4.9.3. Tokens as a Course Currency
  - 4.9.4. Current Metaverses
- 4.10. Decentralized Finance Risks
  - 4.10.1. DeFi 2.0. and the Ponzi Scheme
  - 4.10.2. Hacking smart contracts
  - 4.10.3. Rug Pulls
  - 4.10.4. Impermanent Loss

## Module 5. Cryptoeconomics

- 5.1. Cryptocurrencies and Money
  - 5.1.1. Fiat Money. Operation
  - 5.1.2. Bitcoin vs. Ethereum. The rest
  - 5.1.3. The Role of Stable Currencies
- 5.2. Central Banks and CBDCs
  - 5.2.1. CBDCs
  - 5.2.2. The Digital Yuan Case
  - 5.2.3. Bitcoin vs. CBDCs
  - 5.2.4. El Salvador
- 5.3. Blockchain Evaluation and Valorization
  - 5.3.1. Cash Flow Method
  - 5.3.2. Country Method
  - 5.3.3. Technical Analysis vs. Fundamental Analysis

- 5.4. Wallets
  - 5.4.1. Wallets Key Element
  - 5.4.2. Protected Wallets
  - 5.4.3. Unprotected Wallets
  - 5.4.4. Wallets Promoted by Countries
- 5.5. Tokenomics
  - 5.5.1. Tokenomics: importance
  - 5.5.2. NFTs or Tokens
  - 5.5.3. Type of Tokens Utility vs. Security vs. Governance
- 5.6. Web3 Economics
  - 5.6.1. The Cryptos. New Economy Basis
  - 5.6.2. NFTs and Games
  - 5.6.3. NFTs and Communities
  - 5.6.4. Combined Models of NFTs and Tokens
- 5.7. Digital Identity
  - 5.7.1. Cryptos as a Paradigm of Digital Identity
  - 5.7.2. Digital Identity and DeFi
  - 5.7.3. Soul Bound NFTs
- 5.8. New Banking
  - 5.8.1. Crypto Banks
  - 5.8.2. Crypto Loans
  - 5.8.3. Crypto Interests
  - 5.8.4. Banking System Evolution
- 5.9. Crypto Project Launch
  - 5.9.1. ICO
  - 5.9.2. IDO
  - 5.9.3. ILO
  - 5.9.4. NFTs
  - 5.9.5. Tokenomics and Superfluid
- 5.10. Medium-Term Paradigms
  - 5.10.1. Quantum Computing
  - 5.10.2. Big Data and Blockchain
  - 5.10.3. Decentralization Utopia

## Module 6. Corporate Blockchain

- 6.1. Platform Types, Characteristics and Voting Process
  - 6.1.1. Consensual Blockchain
  - 6.1.2. Participatory Blockchain
  - 6.1.3. Democratic Blockchain
- 6.2. Hyperledger, Enterprise Blockchain Platform
  - 6.2.1. Hyperledger Ecosystem
  - 6.2.2. Hyperledger Fabric
  - 6.2.3. Community. Hyperledger Labs
- 6.3. Corporate Case Studies
  - 6.3.1. Blockchain in the Company
  - 6.3.2. Blockchain-Based Consortia and Joint Ventures
  - 6.3.3. Production Case Studies
- 6.4. Traceability
  - 6.4.1. Blockchain Traceability
  - 6.4.2. Immutability and GDPR Conflict
  - 6.4.3. Legal Validity
- 6.5. Document Certification
  - 6.5.1. Digitalization and Blockchain
  - 6.5.2. Blockchain Certification
  - 6.5.3. IPFS
- 6.6. Blockchain & IoT
  - 6.6.1. Synergy between Technologies
  - 6.6.2. Blockchain & IoT Applications in the Pharmaceutical Industry
  - 6.6.3. Blockchain & IoT Applications in Supply Chain
- 6.7. Other Corporate Blockchain
  - 6.7.1. Corda
  - 6.7.2. Quorum
  - 6.7.3. Hyperledger Besu
  - 6.7.4. Blockchain as a Service

- 6.8. Risks: Case Studies by Sector
  - 6.8.1. Blockchain in Banking
  - 6.8.2. Blockchain in Retail
  - 6.8.3. Blockchain in the Public Sector
- 6.9. Private Network Consensus
  - 6.9.1. BFT / IBFT
  - 6.9.2. Raft
  - 6.9.3. Granpa (Polkadot/Substrate)
- 6.10. Blockchain Vs. Centralized Databases vs. Decentralized Databases
  - 6.10.1. Differences
  - 6.10.2. Similarities
  - 6.10.3. The Best Technological Alternative Choice

## Module 7. New Crypto Business Models protocols

- 7.1. DeFi Protocol Analysis on Bitcoin
  - 7.1.1. DeFi on Bitcoin
  - 7.1.2. Lightning Network
  - 7.1.3. RSK
- 7.2. Analysis of Landing Protocols
  - 7.2.1. Main Landing Protocols
  - 7.2.2. Case Uses
  - 7.2.3. Landing in Crypto Projects vs. Non-Crypto
- 7.3. AMM Protocol Analysis
  - 7.3.1. Main AMM Protocols
  - 7.3.2. Case Uses
  - 7.3.3. Differences Between Landing and AMM
- 7.4. DEX Protocol Analysis
  - 7.4.1. Main DEX Protocols
  - 7.4.2. Case Uses
  - 7.4.3. BPO Vs. CEX

- 7.5. Information and Resource Silos
    - 7.5.1. Information Silos
    - 7.5.2. Crypto Silos Creation: Advantages
    - 7.5.3. Real World Uses of Information Silos
  - 7.6. Protocol Analysis: Liquidity Mining and Yield Farming
    - 7.6.1. 7.6.Protocol Analysis:
    - 7.6.2. Yield Farming Under the Hook
    - 7.6.3. Tactics of Use According to Asset
  - 7.7. Insurance Protocol Analysis
    - 7.7.1. Main Insurance Protocols
    - 7.7.2. Case Uses
    - 7.7.3. Secure Protocol Creation
  - 7.8. Investment Funds
    - 7.8.1. Investment Funds
    - 7.8.2. Crypto Investment Fund Analysis
    - 7.8.3. Crypto Investment Fund Analysis
  - 7.9. Composite Strategies
    - 7.9.1. Cryptocurrency Trading
    - 7.9.2. Strategy Analysis
    - 7.9.3. Use Criteria for Strategies
  - 7.10. Portfolio Analysis, Balancing and Protection
    - 7.10.1. Cryptocurrency Wallets
    - 7.10.2. Asset Analysis
    - 7.10.3. Balancing and Protection Strategies
- Module 8. Investment Strategy Analysis**
- 8.1. Exchange Analysis
    - 8.1.1. Main Competitors
    - 8.1.2. Identification Procedures
    - 8.1.3. Order Types
  - 8.2. DeFi Alternative Markets (Pancake Swap)
    - 8.2.1. Market Players
    - 8.2.2. DeFi Typology
    - 8.2.3. Cash Flow Pools
  - 8.3. Crypto Investment Models
    - 8.3.1. Yield Farming
    - 8.3.2. Flash Loans
    - 8.3.3. CFD Trading
  - 8.4. Coin Stacking
    - 8.4.1. The Right Choice
    - 8.4.2. Temporariness
    - 8.4.3. Masternodes
  - 8.5. Farming
    - 8.5.1. New Economy Model
    - 8.5.2. Time as a Partner
    - 8.5.3. Advanced Farming Platform Analysis
  - 8.6. Investment Portfolio Configuration
    - 8.6.1. Market Efficiency
    - 8.6.2. Volatility Frontier Portfolio
    - 8.6.3. Volatility Positioning
  - 8.7. Crypto Arbitration
    - 8.7.1. Technology and its "Slots"
    - 8.7.2. Market Disagreements
    - 8.7.3. Risk Limitation Techniques
  - 8.8. NFTs Architecture
    - 8.8.1. Fungible vs. Non-Fungible
    - 8.8.2. NFTs on Web3
    - 8.8.3. Architecture of a NFT System



- 8.9. NFT Operations
  - 8.9.1. Create, Buy and Sell NFTs
  - 8.9.2. NFTs and Sport
  - 8.9.3. NFTs and the Immediate Future
- 8.10. Decision-Making and Risk Management
  - 8.10.1. On-Chain Metrics
  - 8.10.2. Project Metrics
  - 8.10.3. Financial Metrics

## Module 9. Compliance Regulations and Crypto Privacy

- 9.1. Digital Identity
  - 9.1.1. Digital Identity Transformation
  - 9.1.2. Self - Sovereign Identity
  - 9.1.3. Regulatory Framework in the Different International Legal Systems
- 9.2. Digital Signature
  - 9.2.1. Electronic Signature
  - 9.2.2. Digital Certificate
  - 9.2.3. Certification Authorities
- 9.3. Compliance
  - 9.3.1. Compliance
  - 9.3.2. Blockchain Compliance
  - 9.3.3. Compliance Models
- 9.4. Crypto and ICO Legality
  - 9.4.1. Regulatory Framework
  - 9.4.2. ICO Launch
  - 9.4.3. From ICOS to IDOS
- 9.5. Crypto Taxation
  - 9.5.1. Tax Treatment of Cryptoassets in the European Union Legal System
  - 9.5.2. Crypto-Asset Taxation Consultations
  - 9.5.3. Tax Accounting Treatment in the European Union

- 9.6. International Regulation in the Different Jurisdictions Regarding the Holding of Cryptoassets. Special Treatment in the Americas
  - 9.6.1. MICA
  - 9.6.2. DORA
  - 9.6.3. EIDAS
  - 9.6.4. The Future of Cryptos According to the European Commission
- 9.7. Cybersecurity
  - 9.7.1. Cybersecurity in Blockchain
  - 9.7.2. Decentralization
  - 9.7.3. Blue Team
- 9.8. Ethics and Digital Errors
  - 9.8.1. Good Faith in the Legality of U.S. Projects
  - 9.8.2. Digital Transformation Mistakes
  - 9.8.3. Organization Structuring Parameters
- 9.9. Regtech and Legaltech Solutions
  - 9.9.1. REGTECH Solutions
  - 9.9.2. LEGALTECH Solutions
  - 9.9.3. Practical Examples
- 9.10. Blockchain Certificates
  - 9.10.1. Blockchain Certification
  - 9.10.2. Sector Business Opportunity
  - 9.10.3. BlockTac

## Module 10. Cryptocurrency and Blockchain Security

- 10.1. Cryptocurrency Security
  - 10.1.1. Cryptography Blockchain Basis
  - 10.1.2. Hash Functions
  - 10.1.3. Public and Private Keys, Uses in Cryptocurrencies

- 10.2. Privacy and Traceability in Operations
  - 10.2.1. Analysis and Traceability of Cryptocurrency Transactions
  - 10.2.2. Anonymity Techniques (Proxy, VPN)
  - 10.2.3. Digital Identity
- 10.3. TOR Network. Security/Safety
  - 10.3.1. TOR Networks
  - 10.3.2. Network Connections and Nodes
  - 10.3.3. Freenet and IP2
- 10.4. VPNs. Security/Safety
  - 10.4.1. VPNs. Operation
  - 10.4.2. Types, Characteristics and Properties
  - 10.4.3. User Profile and Authentication
- 10.5. User Management and Permits
  - 10.5.1. Access Rights Management
  - 10.5.2. Segregation of Roles and Access Functions
  - 10.5.3. Implementation of Access Rights in Systems
- 10.6. Wallet Transaction Security
  - 10.6.1. Hot and Cold Wallets
  - 10.6.2. Hardware and Software Wallet Transactions
  - 10.6.3. Multi-Signature
- 10.7. Cybersecurity and Cryptocurrencies
  - 10.7.1. The Pillars of Security in Cryptocurrencies and Tokens
  - 10.7.2. Risk, Threat and Vulnerability Assessment
  - 10.7.3. Minimum Privileges Law Differences and Similarities between Europe and America
- 10.8. SSO y MFA
  - 10.8.1. Single Sign On
  - 10.8.2. Logical Access Control. MFA Authentication
  - 10.8.3. Passwords. Importance
  - 10.8.4. Authentication Attacks

- 10.9. Safe Custody of Crypto Assets
  - 10.9.1. Differences between Exchange and wallet
  - 10.9.2. Public Keys, Private Keys and Seed or Seed Phrases
  - 10.9.3. Shared Custody
- 10.10. Cryptocurrency Hackers
  - 10.10.1. Types of Crypto Attacks
  - 10.10.2. Cryptocurrency Security Standards
  - 10.10.3. Preventing Attacks on your Cryptocurrencies



*The extensive control of the NFT architecture that you will acquire in this Master's Degree will position you as a highly sought-after computer scientist in the labor market"*

06

# 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.







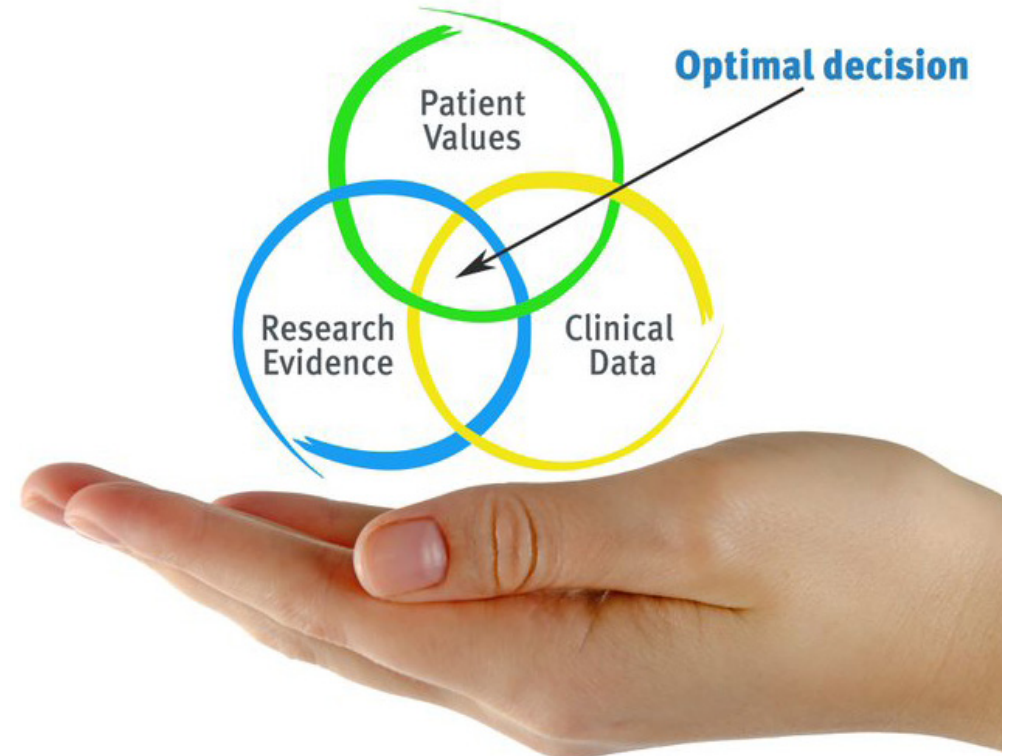
*Discover Relearning, a system that abandons conventional linear learning, to take you through cyclical teaching systems: a way of learning that has proven to be extremely effective, especially in subjects that require memorization"*

## 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.





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

This methodology has trained more than 650,000 university graduates with unprecedented success in fields as diverse as biochemistry, genetics, surgery, international law, management skills, sports science, philosophy, law, engineering, journalism, history, and financial markets and instruments. All this in a highly demanding environment, where the students have a strong socio-economic profile and an average age of 43.5 years.

*Relearning will allow you to learn with less effort and better performance, involving you more in your training, developing a critical mindset, defending arguments, and contrasting opinions: a direct equation for success.*

From the latest scientific evidence in the field of neuroscience, not only do we know how to organize information, ideas, images and memories, but we know that the place and context where we have learned something is fundamental for us to be able to remember it and store it in the hippocampus, to retain it in our long-term memory.

In this way, and in what is called neurocognitive context-dependent e-learning, the different elements in our program are connected to the context where the individual carries out their professional activity.



This program offers the best educational material, prepared with professionals in mind:



#### Study Material

All teaching material is produced by the specialists who teach the course, specifically for the course, so that the teaching content is highly specific and precise.

These contents are then applied to the audiovisual format, to create the TECH online working method. All this, with the latest techniques that offer high quality pieces in each and every one of the materials that are made available to the student.



#### Classes

There is scientific evidence suggesting that observing third-party experts can be useful.

Learning from an Expert strengthens knowledge and memory, and generates confidence in future difficult decisions.



#### Practising Skills and Abilities

They will carry out activities to develop specific skills and abilities in each subject area. Exercises and activities to acquire and develop the skills and abilities that a specialist needs to develop in the context of the globalization that we are experiencing.



#### Additional Reading

Recent articles, consensus documents and international guidelines, among others. In TECH's virtual library, students will have access to everything they need to complete their course.





#### 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.





# 07 Certificate

The Master's Degree in Cryptocurrency Trading guarantees students, in addition to the most rigorous and up-to-date education, access to a Master's Degree issued by TECH Global University.





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*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 **Master's Degree diploma in Cryptocurrency Trading** 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: **Master's Degree in Cryptocurrency Trading**

Modality: **online**

Duration: **12 months**

Accreditation: **60 ECTS**



\*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.



## Master's Degree Cryptocurrency Trading

- » Modality: online
- » Duration: 12 months
- » Certificate: TECH Global University
- » Credits: 60 ECTS
- » Schedule: at your own pace
- » Exams: online

# Master's Degree Cryptocurrency Trading