# Postgraduate Diploma

Metaverse Technologies







# Metaverse Technologies

» Modality: online

» Duration: 6 months

» Certificate: TECH Global University

» Credits: 18 ECTS

» Schedule: at your own pace

» Exams: online

» Target Group: University Graduates who have previously completed any of the degrees in the field of Social and Legal Sciences, Administration and Business, as well as technology professionals who are looking to reinvent their careers in an industry with many possibilities for the future.

 $We bsite: {\color{blue}www.techtitute.com/us/school-of-business/postgraduate-diploma/postgraduate-diploma-metaverse-technologies}$ 

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# 01 **Welcome**

The wide range of opportunities that have arisen from the development of the Metaverse and its multiple applications has generated a very large demand for professionals who master the technologies required to carry out this type of projects. From the construction of value chains, to the automation of processes, to the tokenization of physical or virtual assets, any specialist who masters this area has a guaranteed professional future. And if, in addition, they have a set of skills that distinguish them as a decisive and effective leader, success will be within their reach. For this reason, TECH has adapted this educational experience so that the graduate will be able, in only 450 hours of qualification, to acquire the necessary competencies to surpass these requirements with flying colors. All this 100% online and with the support of a team of experts in the development of international virtual environments.









# 08 | Why Study at TECH?

# At TECH Global University

#### **Innovation**

The university offers an online learning model that balances 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.

+100000

+200

executives prepared 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 the most rigorous and up-to-date case analyses in academia"

# 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 method (postgraduate learning methodology with the best international valuation) with the Case Study. Tradition and vanguard in a difficult balance, and in the context of the most demanding educational itinerary.



# **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 you with a multitude of professional and personal advantages, among which we highlight the following:



### A Strong Boost to Your Career

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 students achieve positive career development in less than 2 years.



# Develop a strategic and global vision of the company

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

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.



# You will 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 fields 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.



# You will be part of an exclusive community

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

We give you the opportunity to study 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 Metaverse Technologies** will enable students to:



Examine the importance of Blockchain values in a new virtual world



Unravell the role of data in the Metaverse



Delve into the opportunities that Blockchain offers us as users of the Metaverse

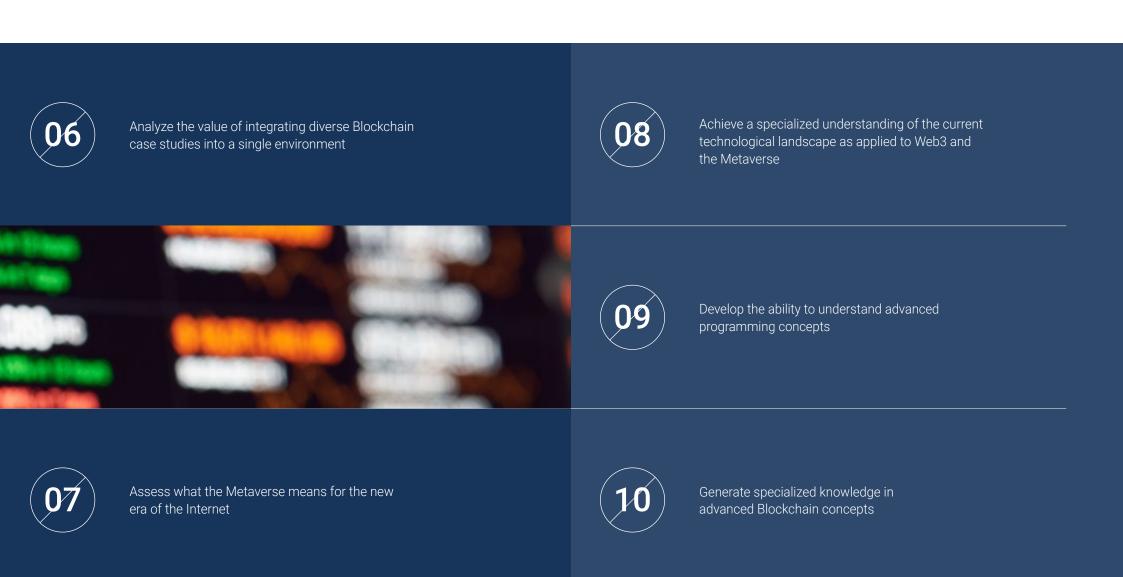




Develop Metaverse business models, powered by Blockchain



Transform Blockchain case studies into value for Metaverse users





Become familiar with the use of development and design environments applied to the video game industry and programming



Enhance the projection capacity of current technologies into the future



Analyze the wide variety of technologies that can be applied to the Metaverse



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Assess the possibilities of interconnection between platforms and providers in the Metaverso ecosystem



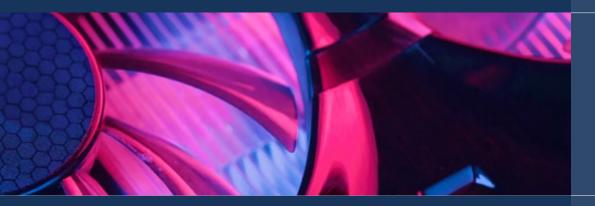
Generate a defined structure for the operation and application of the Metaverse in all the areas in which it will be developed



Determine the opportunities presented by the application of the Metaverse at personal, social and business levels



Analyze all the factors that can affect the psychological aspects of our life in an unreal universe in order to apply limits





Enhance the ideas already established for the Metaverse and be able to find solutions to the challenges currently encountered in its development

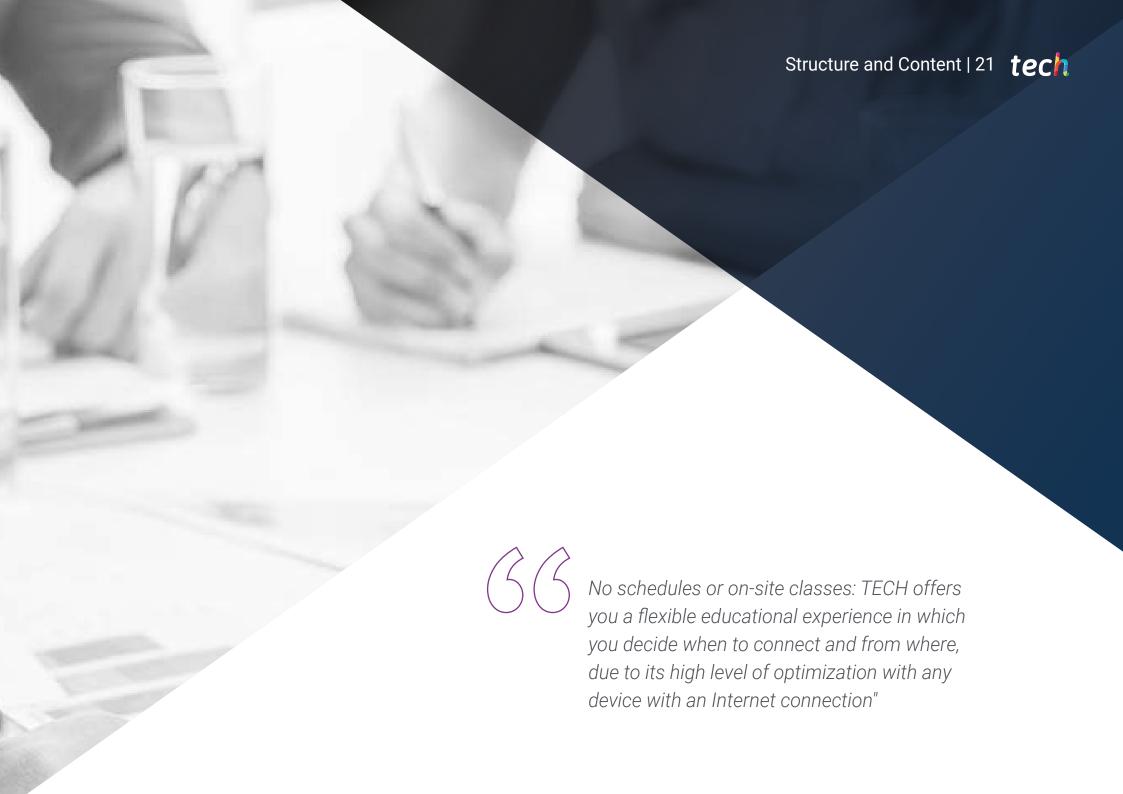


Internalize the challenges in the sectors forced to adapt in their immersion in the Metaverse, and how to solve them in order to find the advantages and use them for our own benefit



Analyze all the actors, areas and opportunities so far raised in the Metaverse idea





# tech 22 | Structure and Content

# **Syllabus**

TECH and the teaching team selected for this Postgraduate Diploma have developed the syllabus taking into account, on the one hand, the most cutting-edge and specialized information on technology for the Metaverse and, on the other hand, the current labor demand. Thanks to this, it has been possible to shape an educational experience through which the graduate will acquire a very high degree of knowledge, while adapting their work profile to the demands of the industry.

For the program, 450 hours of diverse material have been selected, thanks to which the specialist will be able to delve into aspects such as: the Blockchain and the keys to build a decentralized Metaverse, as well as advanced technologies for its development, and the current scenario in the race to build the future virtual world.

This is an unparalleled experience that cannot be compared to what has been offered by the educational market so far.

In addition, graduates will be able to perfect their leadership skills and management of complex situations through the resolution of real cases based on the success strategies of leading projects in the digital industry. In this way, they will be able to include in their résumé a skill that is highly valued by companies, as well as a distinctive asset in the form of educational experience that will undoubtedly open the doors to a successful working future.

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

Module 1 Blockchain: The Key to Building a Decentralized Metaverse

Module 2 Advanced Technologies for Metaverse Development

Module 3 Current Overview of the Race to Build the Metaverse Future



# Where, When and How is it Taught?

TECH offers the possibility of developing this Postgraduate Diploma in Metaverse Technologies completely online. Over the course of 6 months, 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

Module 1. Blockchain: The Key to Building a Decentralized Metaverse							
1.1. 1.1.1. 1.1.2. 1.1.3.	and Social Context	1.2.1. 1.2.2. 1.2.3.	Public or Private Blockchains. New Governance Model Public or Private Blockchains Blockchain. Governance Model Blockchain. Case Studies	1.3. 1.3.1. 1.3.2. 1.3.3.	Blockchain. The Value of Data  Data Value in a New Digital Paradigm Blockchain's Data and Value Contribution Advanced Technologies for Working with Governed Data	1.4.1. 1.4.2. 1.4.3.	Metaverse Decentralization and Automation  Decentralization and Automation Technological Response to User Needs Businesses of the Future
1.5.1. 1.5.2. 1.5.3.			Digital Asset Ownership, Value and Tokenization  Non Fungible Token (NFTs) Value Physical or Virtual Asset Tokenization Digital Assets in the Metaverse Case Uses	1.7. 1.7.1. 1.7.2. 1.7.3.	Metaverse Economy Storing and Exchanging Value with Cryptocurrencies User and Organization Business Models Metaverse Finance Empowered by the Blockchain	1.8. 1.8.1. 1.8.2. 1.8.3.	Digital Identity Our Digital Identity Certification Metaverse Avatars Users and Organizations. Digital Identity
1.9. 1.9.1. 1.9.2. 1.9.3.		1.10.1	The Metaverse New Internet Reinventing the Internet through the Metaverse New Economic and Social Environment Physical and Virtual World Connection				

<b>2.1.</b> 2.1.1. 2.1.2. 2.1.3.	State-of-the-art Metaverse Development Technical Aspects for Web2 Technologies Supporting the Metaverse Technical Aspects for Web3	2.2.1. 2.2.2. 2.2.3.	Development Environment, Programming Languages and Web2 Frameworks Web2 Development Environments Web2 Programming Languages Frameworks Web2	2.3.1. 2.3.2. 2.3.3.	Development Environment, Programming Languages and Web3 Frameworks Web2 Development Environments Web2 Programming Languages Frameworks Web2	2.4.1. 2.4.2.	Oracles and Multichain Onchain vs. Offchain Interoperability Multichain
<b>2.5.</b> 2.5.1. 2.5.2. 2.5.3.	Graphics Engines and 3D Design Softwares AIH vs. GPU Graphics Engines 3D Design Software	<b>2.6.</b> 2.6.1. 2.6.2. 2.6.3.	Devices and Platforms Video Game Hardware Platforms Current Competitive Landscape	<ul><li>2.7.</li><li>2.7.1.</li><li>2.7.2.</li><li>2.7.3.</li></ul>	Big Data and Artificial Intelligence in Metaverse Data Science. Data Transformation into Information Big Data. Data Lifecycle Strategy in the Metaverse Artificial Intelligence. User Experience Personalization	2.8.1. 2.8.2.	Augmented Reality, Virtual Reality and Mixed Reality in the Metaverse Alternative Realities Augmented Reality vs Virtual reality Mixed Reality
2.9.1. 2.9.2. 2.9.3.	Internet of Things and 3D Reconstruction 5G and Telecommunication Networks Internet of Things 3D Reconstruction	2.10.1 2.10.2	The Future of Technology The 2050 Metaverse . Technological Barriers . Development Pathways . The 2050 Metaverse				

# tech 26| Structure and Content

Module 3. Current Overview of the Race to Build the Metaverse Future								
3.1.1. 3.1.2. 3.1.3.	Industry Players' Vision of the Metaverse Metaverse Implementation in Existing Structures Companies Developing Metaverses Established Companies in the Metaverse	3.2.1. 3.2.2. 3.2.3.	Metaverse Digital Identity and Social and Ethical Implications Metaverse Digital Identity Social Implications Ethical Implications	<b>3.3.</b> 3.3.1. 3.3.2. 3.3.3.	Metaverse Beyond Gaming Gaming as a Contact Point Sectors that Are Here to Stay Reinventing Some Businesses	3.4.1. 3.4.2.	Metaverse Work and Professional Environment Metaverse Job Opportunity Identification New Professional Careers Current Work Adaptation to the Metaverse	
<b>3.5.</b> 3.5.1. 3.5.2. 3.5.3.	Metaverse Neuromarketing Metaverse Consumer Behavior Experience Marketing Metaverse Neuromarketing Strategies	<b>3.6.</b> 3.6.1. 3.6.2. 3.6.3.	Metaverse and Cybersecurity Involved Threats Metaverse Digital Security Changes Identification Metaverse Real Cybersecurity	3.7.1. 3.7.2. 3.7.3.	Emotional and Psychological Implications after the Metaverse Experience Good Practices Adaptation to a New Experience Side Effects of Metaverse Interaction Metaverse Best Practices	3.8.1.	Adapting Legality to the Metaverse Legal Challenges Posed By Today's Metaverse Necessary Legal Changes Contracts, Intellectual Property and Other Relationship Types	
3.9.1. 3.9.2. 3.9.3.	Medium-Term Roadmap	3.10.1. 3.10.2.	Metaverse, Paradigm of the Future Unique Growth Opportunity Metaverse Specialization Monetization of the Virtual Future					





This program will give you the keys to master oracles and Multichain, as well as the main tools to foster the interoperability of your virtual projects"



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 30 | 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 32 | 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 | 33 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.

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**

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.



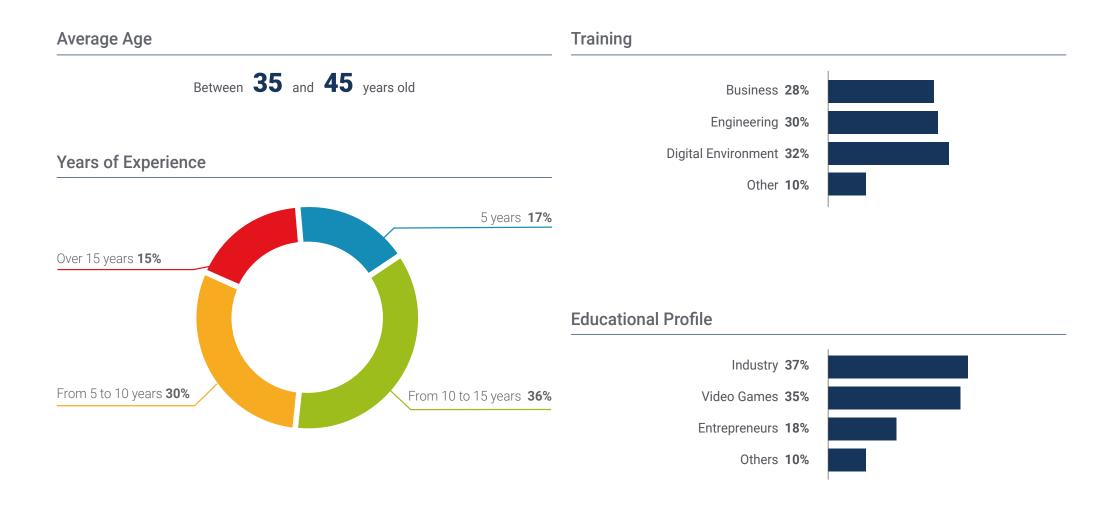


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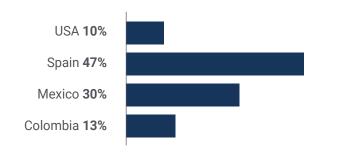




# tech 38 | Our Students' Profiles



### **Geographical Distribution**





# **Cristian Expósito**

Chief Technology Officer of a Technological Company

"I considered myself a technology specialist before taking this educational experience, but TECH has helped me to reach the level of an expert in such a complex area as the one related to the Metaverse. It is an educational experience that has allowed me to become intensively involved in the keys to value chains for building decentralized environments, helping me to actively contribute to the race to build the future of the Metaverse"





# tech 42 | Course Management

### Management



## Mr. Cavestany Villegas, Íñigo

- Co-Founder & Head of Ecosystem of Second World
- Web3 and Gaming Leader
- IBM Cloud Specialist at IBM
- Advisor at Netspot OTN, Velca and Poly Cashback
- Teacher in business schools such as IE Business School or IE Human Sciences and Technology
- Graduate in Business Administration from IE Business School
- Master's Degree in Business Development from the Autonomous University of Madrid
- IBM Cloud Specialist
- Profession Certification in IBM Cloud Solution Advisor



# Course Management | 43 tech

#### **Professors**

#### Mr. Cameo Gilabert, Carlos

- Fundador y Chief Technology Officer de Second World
- Co-founder of Netspot
- Co-founder of Banc
- Chief Technology Officer at Jovid
- Freelance Full Stack Developer
- Industrial Engineer, Polytechnical University of Madrid
- Master's Degree in Data Science from the Polytechnic University of Madrid

#### Mr. Casero García, Marco Antonio

- Chief Operating Officer at SecondWorld
- Event Manager at The Pokémon Company International
- Manager of Metropolis Ab Alea SL
- PR Comunicaction Manager at Cereal Talent Café
- Graduate in Business Sciences from the Rey Juan Carlos University
- Computer Systems Administrator with specialization in Networking
- Master's Degree in Commercial Management from CEF Centro de Estudios Financieros
- Master's Degree in Marketing by CEF Centro de Estudios Financieros





# tech 46 | Impact on Your Career

A distinctive asset that will open the doors to a job market full of opportunities and with which you will be able to reach the most prestigious positions within companies that are strong supporters of the Metaverse such as BMW or Disney.

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

TECH's Postgraduate Diploma in Metaverse Technologies is an intensive program that prepares you to face challenges and business decisions in the field of management and direction of digital and virtual environments. The main objective is to promote personal and professional growth. Helping students achieve success.

If you want to improve yourself, make a positive change professionally and network with the best, this is the place for you. Aim far in your professional future because with this Postgraduate DIploma you will be able to achieve everything you set your mind to.

### **Time of Change**

During the program

59%

After 2 years
26%

#### Type of Change

Internal Promotion 35%
Change of Company 37%
Entrepreneurship 28%

## Salary Increase

The completion of this program represents a salary increase of more than **27.32%** for our students.

Salary before

\$56,700

A salary increase of

27,32%

Salary after

\$72,200





# tech 50 | 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 program will equip students with the skills to take on new challenges and drive the organization forward.





## tech 54 | Certificate

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

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

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

Title: Postgraduate Diploma in Metaverse Technologies

Modality: online

Duration: 6 months

Accreditation: 18 ECTS



#### Postgraduate Diploma in Metaverse Technologies

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

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

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



<sup>\*</sup>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.



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