

# Postgraduate Certificate

Advanced Technologies for the  
Development of the Metaverse



## Postgraduate Certificate Advanced Technologies for the Development of the Metaverse

- » Modality: online
- » Duration: 6 weeks
- » Certificate: TECH Technological University
- » Dedication: 16h/week
- » Schedule: at your own pace
- » Exams: online
- » Target Group: University Graduates, Graduates and Undergraduates who have previously completed any of the programs in the fields of Social and Legal Sciences, Administrative and Business Sciences

Website: [www.techitute.com/pk/school-of-business/postgraduate-certificate/advanced-technologies-development-metaverse](http://www.techitute.com/pk/school-of-business/postgraduate-certificate/advanced-technologies-development-metaverse)

# Index

01

Welcome

---

*p. 4*

02

Why Study at TECH?

---

*p. 6*

03

Why Our Program?

---

*p. 10*

04

Objectives

---

*p. 14*

05

Structure and Content

---

*p. 18*

06

Methodology

---

*p. 24*

07

Our Students' Profiles

---

*p. 32*

08

Course Management

---

*p. 36*

09

Impact on Your Career

---

*p. 40*

10

Benefits for Your Company

---

*p. 44*

11

Certificate

---

*p. 48*

# 01 Welcome

New Metaverse technologies have become a booming technology trend today, and their importance lies in the creation of increasingly realistic and immersive virtual environments. Companies are beginning to recognize the potential of the metaverse as a tool to improve their efficiency and productivity, as well as to provide new user experiences and business opportunities. From education to marketing, the metaverse has the potential to transform multiple sectors. To address this trend, TECH Technological University has created a 100% online program, focused on new Advanced Technologies for the Development of the Metaverse, which uses the pedagogical methodology of *Relearning*, which focuses on personalized learning and practical skills acquisition.



Postgraduate Certificate in Advanced Technologies for the Development of the Metaverse.  
TECH Technological University



“

*If you are looking to train in one of today's most promising technology trends and enhance your profile in a constantly evolving environment, this program is for you!"*

02

# Why Study at TECH?

TECH is the world's largest 100% online business school. It is an elite business school, with a model based on the highest academic standards. A world-class center for intensive managerial skills education.



“

*TECH is a university at the forefront of technology, and puts all its resources at the student's disposal to help them achieve entrepreneurial success"*



## At TECH Technological 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**

executives prepared each year

**+200**

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.





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



### 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"*



### 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 groundbreaking price**. This way, TECH ensures that studying is not as expensive for students as it would be at another university.

03

# Why Our Program?

Studying this TECH program means increasing the chances of achieving professional success in senior business management.

It is a challenge that demands effort and dedication, but it opens the door to a promising future. Students will learn from the best teaching staff and with the most flexible and innovative educational methodology.





“

*We have highly qualified teachers and the most complete syllabus on the market, which allows us to offer you education of the highest academic level”*

This program will provide you with a multitude of professional and personal advantages, among which we highlight the following:

**01**

### 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.*

**02**

### 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.*

**03**

### 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.*

**04**

### 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.*

05

### 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.*

06

### 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.*

07

### 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.*

08

### 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 Technological University community.

*We give you the opportunity to study with a team of world-renowned teachers.*

# 04 Objectives

The Postgraduate Certificate in Advanced Technologies for the Development of the Metaverse provides students with the opportunity to achieve a wide range of objectives. Upon completion of this program, students will have a thorough understanding of the technological foundations that enable the Metaverse, as well as the ability to develop applications of current Web2 technologies to the Metaverse and understand the current technology landscape as applied to Web3 and the Metaverse. Additionally, students will develop advanced skills in programming and Blockchain, become familiar with development and design environments used in the video game and programming industry.





“

*With this certification, they will be able to assess the possibilities for interconnection between platforms and providers in the Metaverse ecosystem and enhance your ability to project technologies into the future”*



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

The Postgraduate Certificate in Advanced Technologies for the Development of the Metaverse will enable students to:

01

Examine the technological foundations that make the Metaverse possible

04

Achieve a specialized understanding of the current technological landscape as applied to Web3 and the Metaverse

02

Delve into the development environments, languages, vendors, devices and platforms involved in the Metaverse

03

Develop current applications of Web2 technologies to the Metaverse

05

Develop the ability to understand advanced programming concepts



06

Generate specialized knowledge in advanced Blockchain concepts

08

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

09

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

07

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

10

Enhance the projection capacity of current technologies into the future



# 05

# Structure and Content

The Postgraduate Certificate in Advanced Technologies for the Development of the Metaverse is 100% online and is taught through *Relearning* methodology. The syllabus includes technical aspects for Web2 and Web3, oracles and multichain, graphics engines and 3D design software, devices and platforms, big data and artificial intelligence, augmented and virtual reality, Internet of Things and 3D reconstruction, as well as the future of the metaverse in 2050. The student will be able to acquire advanced skills in programming, *Blockchain*, video games and web technologies, and develop the ability to understand advanced programming and *Blockchai* concepts.



“

*Want to be an architect of the digital future?  
Join this program and acquire advanced skills  
in programming, blockchain, video games  
Power your knowledge and project your career  
into the digital future”*

## Syllabus

The Metaverse is a virtual universe in which reality and fiction are mixed, where users can interact and create a whole new world. Nowadays, Advanced Technologies for the Development of the Metaverse are a necessity, since the video game sector and for example *e-Sports* is one of the most sought after globally. For this reason, TECH Technological University has created a Postgraduate Certificate in Advanced Technologies for Metaverse Development that trains students in the necessary skills to be part of this ever-growing industry.

During 150 hours of training 100% online, students will learn about the state of the art in Metaverse development, technical aspects for Web2 and Web3, graphics engines and 3D design software, devices and platforms, Big Data and Artificial Intelligence in the Metaverse, Augmented Reality, Virtual Reality and Mixed Reality in the Metaverse, Internet of Things and 3D Reconstruction, and the future of Technology in the Metaverse.

Students will also have the opportunity to work in teams and face case studies to gain a complete understanding of the industry. The program will enable students to acquire the necessary skills and knowledge to understand and use Advanced Technologies for the Development of the Metaverse, and will be able to develop innovative projects in the sector.

This Postgraduate Certificate in Advanced Technologies for the Development of the Metaverse is developed over 6 weeks and is divided into 1 module:

### Module 1

### Advanced Technologies for Metaverse Development



### Where, When and How is it Taught?

TECH Technological University offers the possibility of developing this Postgraduate Certificate in Advanced Technologies for the Development of the Metaverse in a totally online way. During the 6 weeks of the specialization, the student will be able to access all the contents of this program at any time, which will allow the students to self-manage their study time.

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

**Module 1. Advanced Technologies for Metaverse Development**

**1.1. State-of-the-art Metaverse Development**

- 1.1.1. Technical Aspects for Web2
- 1.1.2. Technologies Supporting the Metaverse
- 1.1.3. Technical Aspects for Web 3

**1.2. Development Environment, Programming Languages and Web2 Frameworks**

- 1.2.1. Web2 Development Environments
- 1.2.2. Web2 Programming Language
- 1.2.3. Web2 Frameworks

**1.3. Development Environment, Programming Languages and Web3 Frameworks**

- 1.3.1. Web2 Development Environments
- 1.3.2. Web2 Programming Languages
- 1.3.3. Web2 Frameworks

**1.4. Oracles and Multichain**

- 1.4.1. Onchain vs Offchain
- 1.4.2. Interoperability
- 1.4.3. Multichain

**1.5. Graphics Engines and 3D Design Software**

- 1.5.1. CPU vs GPU
- 1.5.2. Graphics Engines
- 1.5.3. 3D Design Software

**1.6. Devices and Platforms**

- 1.6.1. Video Game Hardware
- 1.6.2. Platforms
- 1.6.3. Current Competitive Landscape

**1.7. Big Data and Artificial Intelligence in Metaverse**

- 1.7.1. Data Science. Data Transformation into Information
- 1.7.2. Big Data. Data Lifecycle Strategy in the Metaverse
- 1.7.3. Artificial Intelligence User Experience Personalization

**1.8. Augmented Reality, Virtual Reality and Mixed Reality in the Metaverse**

- 1.8.1. Alternative Realities
- 1.8.2. Augmented Reality vs. Virtual Reality
- 1.8.3. Mixed Reality

**1.9. Internet of Things and 3D Reconstruction**

- 1.9.1. 5G and Telecommunication Networks
- 1.9.2. Internet of Things
- 1.9.3. 3D Reconstruction

**1.10. The Future of Technology The 2050 Metaverse**

- 1.10.1. Technological Barriers
- 1.10.2. Development Pathways
- 1.10.3. The 2050 Metaverse



*The training of this Postgraduate Certificate will give you a competitive advantage in the labor market, increasing your professional opportunities”*







# 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"*



## 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.

“

*At TECH, you will experience a learning methodology that is shaking the foundations of traditional universities around the world”*



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



## 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.

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

## 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.





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.



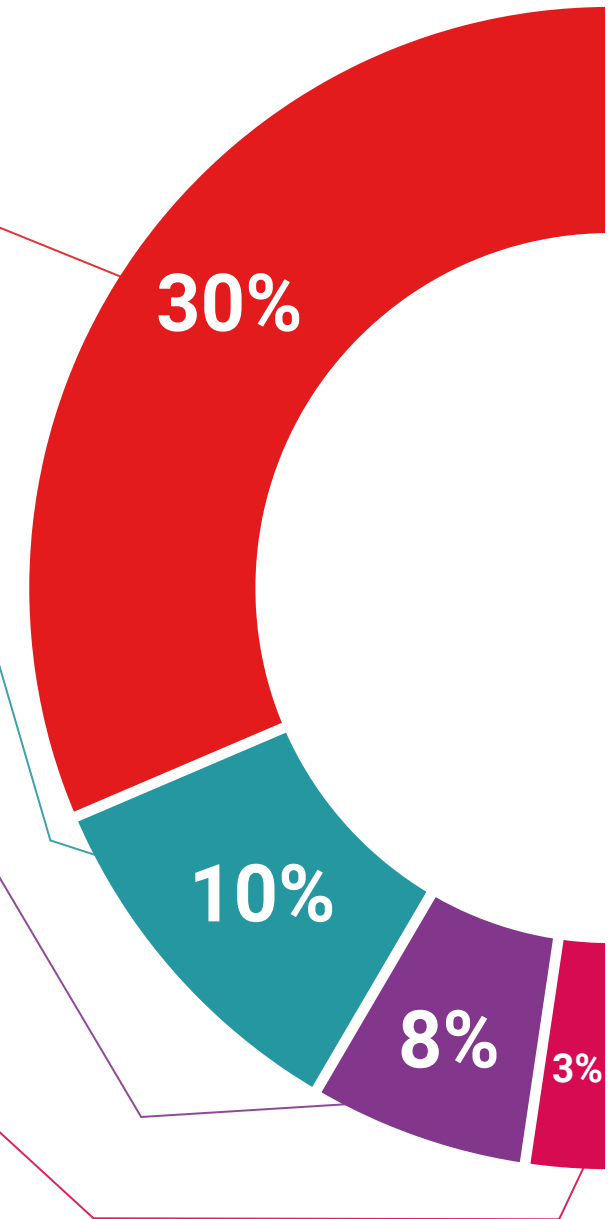
### Management Skills Exercises

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.





### 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 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.



07

# Our Students' Profiles

The Postgraduate Certificate in Advanced Technologies for the Development of the Metaverse is aimed at University Graduates, Graduates and Undergraduates who have previously completed any of the following degrees in the field of Social and Legal Sciences, Administration and Economics, as well as those specialized in the area of Engineering and Computer Science with an interest in virtual worlds.

The diversity of participants with different academic profiles and from multiple nationalities makes up the multidisciplinary approach of this program.

The Postgraduate Certificate in Advanced Technologies for the Development of the Metaverse can also be taken by professionals who, being university graduates in any area, have two years of work experience in the technological field of virtual and digital contexts.





“

*Immerse yourself in the digital future with this Postgraduate Certificate and learn the technological fundamentals, develop advanced applications and become an expert in the interconnection of platforms”*

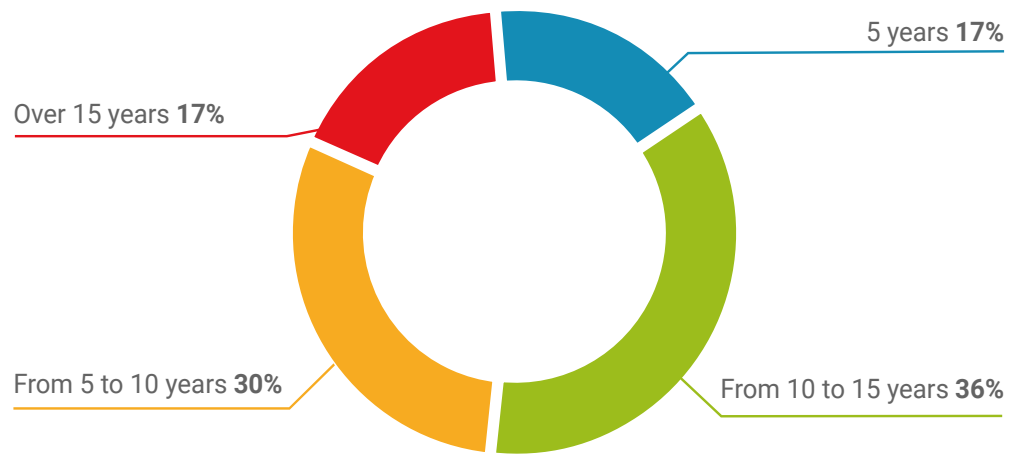
### Average Age

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Between **35** and **45** years old

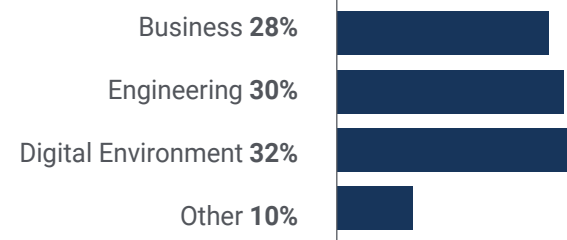
### Years of Experience

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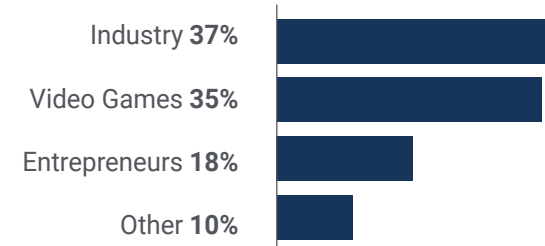
### Training

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### Educational Profile

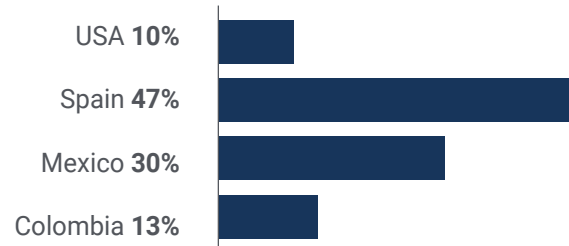
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## Geographical Distribution

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## Juan Pérez Rojas

Senior Metaverse Developer

*"Thanks to the Postgraduate Certificate in Advanced Technologies for Development of the Metaverse, I was able to develop unique skills in virtual and augmented reality. Now, as a senior developer of metaverse experiences in a major technology company, I can say that this course was key in my professional success"*

08

# Course Management

TECH Technological University has assembled a team of experts in the various areas covered by the Advanced Technology for the Development of the Metaverse to ensure the quality of its didactic content. The teachers, with experience in the metaverse, have enriched the syllabus with their practical and distinctive approach to each of the topics covered, which will allow the student to have access to a high quality education in the subject.





“

*Rely on the best experts and gain the necessary knowledge to develop Advanced Technologies for the Development of the Metaverse”*

## 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

## 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



Vol 4 202  
MITH | BTC

Vol 4 429  
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Vol 3 053  
BCHSV | BTC

Vol 1 960  
TUSD | BTC

Vol 1 863  
MANA | BTC

Vol 1 418  
BTC | BTC

0.00000301  
\$ 0.15

0.00000013  
\$ 0.32

0.053280  
\$ 25.50

0.00059053  
\$ 1.05

0.0000125  
\$ 0.01

0.0009110  
\$ 2.82

+1.2%

-1.20%

+0.13%

+13%

+0.13%



09

# Impact on Your Career

Taking the Postgraduate Certificate in Advanced Technologies for the Development of the Metaverse can have a significant impact on a professional's career. This training program provides a solid foundation of knowledge and skills in the field of virtual reality and metaverse development, which are constantly evolving and in demand in the job market. Graduates of this program will be equipped with the technical skills necessary to create innovative and effective virtual and augmented reality experiences, which will enable them to excel in their field and have a major impact on the industry.



“

*This program can be an excellent opportunity to network with other professionals in the field and explore new job opportunities in an emerging and growing market”*

*Explore new worlds with this postgraduate certificate program and gain practical skills in virtual and augmented reality with subject matter experts and become the expert of the digital future.*

### Are you ready to take the leap?

#### Excellent professional development awaits you.

TECH's Technological University's Postgraduate Certificate in Advanced Technologies for the Development of the Metaverse is an intensive program that prepares you to face challenges and business decisions in the field of Metaverse Management. The main objective is to promote your personal and professional growth. Helping you achieve success.

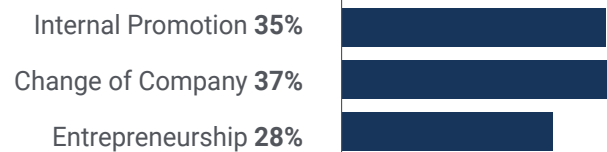
If you want to improve yourself, make a positive change at a professional level, and network with the best, then this is the place for you.

*Having a Metaverse specialist can be a competitive advantage for any company looking to stay at the forefront in the digital era. Don't miss this opportunity.*

### Time of change



### Type of change



## Salary increase

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



10

# Benefits for Your Company

Companies can greatly benefit from having a specialist who has completed the Postgraduate Certificate in Advanced Technologies for the Development of the Metaverse. This is because a professional trained in this area can help the company develop immersive applications and user experiences that can improve efficiency and productivity of the company, as well as provide new business and marketing opportunities. Additionally, a Metaverse expert can offer unique insights into emerging technologies and how they can be applied to the enterprise.







“

*Having a Metaverse specialist can improve efficiency, provide new business opportunities and be a competitive advantage”*

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

01

### **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.

---

02

### **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.

03

### **Building agents of change**

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

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04

### **Increased international expansion possibilities**

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



05

### **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.

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06

### **Increased competitiveness**

This program will equip students with the skills to take on new challenges and drive the organization forward.

11

# Certificate

The Postgraduate Certificate in Advanced Technologies for the Development of the Metaverse guarantees students, in addition to the most rigorous and up-to-date education, access to a Postgraduate Certificate issued by TECH Technological University.



“

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

This **Postgraduate Certificate in Advanced Technologies for the Development of the Metaverse** contains the most complete and up-to-date program on the market.

After the student has passed the assessments, they will receive their corresponding **Postgraduate Certificate** issued by **TECH Technological University** via tracked delivery\*.

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

Title: **Postgraduate Certificate in Advanced Technologies for the Development of the Metaverse**

Official N° of hours: **150 h.**



\*Apostille Convention. In the event that the student wishes to have their paper certificate issued with an apostille, TECH EDUCATION will make the necessary arrangements to obtain it, at an additional cost.





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Advanced Technologies for the  
Development of the Metaverse

