

# Postgraduate Diploma Metaverse Technologies



## Postgraduate Diploma Metaverse Technologies

- » Modality: online
- » Duration: 6 months
- » Certificate: TECH Technological University
- » Dedication: 16h/week
- » Schedule: at your own pace
- » Exams: online

Website: [www.techtute.com/us/information-technology/postgraduate-diploma/postgraduate-diploma-metaverse-technologies](http://www.techtute.com/us/information-technology/postgraduate-diploma/postgraduate-diploma-metaverse-technologies)

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# 01

# Introduction

Facebook has changed its name to meta in a desperate attempt to reconvert itself. The future of technology is concentrated in virtual worlds. With this tool, travel will no longer be a problem and 3D space will go much further. It implies new forms of sociability that will transform citizenship. At the same time, cyberspace promises greater environmental awareness and less harmful digital consumerism. For this space to develop properly, professionals in the sector must master tools such as *Blockchain* that enable the authenticity of processes in an ever-closer world. TECH Technological University offers a 100% online program, aimed at IT professionals who wish to master virtual market models and the development of the digital era.



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*With this Postgraduate Diploma, you will master an emerging world that presents challenges and opportunities for today's social communities. Delve into the Forth Industrial Revolution, thanks to TECH”*

Today's IT professionals have had to face changes to which the population is still adapting, such as the digitization of banking processes. However, according to the predictions surrounding the Metaverse, this new paradigm presents a greater challenge for digital professionals. In this sense, specialists will have to master the possibilities of interconnection between platforms and their providers in the Metaverse ecosystem; the development of Metaverse business models, powered by the *Blockchain*; as well as the use of development and design environments applied to the video game and programming industry.

This is a whole web of new knowledge that requires a high degree of qualification, given the continuous changes occurring in this sector. For this reason, TECH Technological University has designed a complete and rigorous program whose main objective is to increase the skills of IT professionals in the new era of the Internet. It is a program that covers the latest developments and technical tools, which brings the student closer to professionals in the sector, providing the best and most updated first-hand teaching.

TECH Technological University has adapted the teaching experience in such a way that the professional will be able, in only 450 hours of training, to acquire the necessary skills to surpass the demands of a constantly changing sector. This is a 100% online program so that students can combine their personal life with the most innovative program in Metaverse Technologies. In addition, professionals will be supported by a team of experts in the development of international virtual environments. Also, thanks to the *Relearning* teaching methodology, students will not have to invest long hours of memorization present in other conventional programs, but they will assimilate the contents gradually, reaching the requirements to pass the study.

This **Postgraduate Diploma in Metaverse Technologies** contains the most complete and up-to-date program on the market. The most important features include:

- ◆ Development of case studies presented by experts in Metaverse, *Blockchain* and *aming*
- ◆ 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



*Step into the virtual world by meeting the needs of users and the governance model within the Metaverse"*

“

*Differentiate yourself from other professionals gaining a comprehensive qualification in Metaverse economics that will make you a multidisciplinary specialist with more options in the labor market"*

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. For this purpose, the student will be assisted by an innovative interactive video system created by renowned and experienced experts.


*Become an expert in the functioning of DAOs, the transparent rules of the game and the structures that support the Meta model.*

*Be part of the technological evolution and the reinvention of the economy by intervening in the decentralization and automation of processes.*



# 02 Objectives

This Postgraduate Diploma in Metaverse Technologies enables students to lead innovative technological projects and get up to date with the latest developments in the cybernetic market. This program aims to expand the range of job opportunities for IT professionals, bringing them closer to the technologies applied to the Metaverse; the various use cases of the *Blockchain* in a single environment and the importance of its values, among many other issues. All this, with the aim of enabling the professionals to put into practice the knowledge acquired and achieve professional and personal success in the development of virtual worlds.

The background of the slide features a 3D digital landscape. Large, glowing cyan letters spell out 'WORLD' across the middle. The ground is a dark blue grid with various sized cubes floating at different heights, creating a sense of depth and a virtual environment. The overall color palette is dominated by shades of blue and cyan.



“

*Achieve your goals now and master the application of Big Data and artificial intelligence in the Metaverse, without neglecting your personal and professional life, thanks to a 100% online program"*



## General Objectives

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- ◆ Generate specialized knowledge on Web 3.0
- ◆ Examine each of the components that make up a Metaverse
- ◆ Develop a Metaverse from the available tools and components
- ◆ Analyze the importance of *Blockchain* as a data governance model
- ◆ Justify the connection of *Blockchain* with the present and future of the Metaverse
- ◆ Discover case studies and the impact of decentralized finance in our present and future world
- ◆ Analyze the video game industry's evolution and the first primitive examples of Metaverse
- ◆ Delve into classic business models, the general state of the industry and the creation of the *GameFi* concept
- ◆ Establish synergies between *e-Sport* and other *gaming* industry ecosystems with respect to the current Metaverse
- ◆ Develop new skills that allow students to identify business opportunities in the different media of the metaverse
- ◆ Identify and promote all possible monetization avenues within the Metaverses
- ◆ Delve into the Metaverse experience from a different perspective, being able to understand how all this potential development affects us and answer all the questions of its application in the medium to long term
- ◆ Make the Metaverse part of our daily life to be able to get the most out of it in all its areas
- ◆ Prepare ourselves for all the changes that the Metaverse poses for the future and know how it can affect life, business or the way we interact with others





## Specific Objectives

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### Module 1. *Blockchain*: The Key to Building a Decentralized Metaverse

- ◆ Examine the importance of *Blockchain* values in a new virtual world
- ◆ Delve into the opportunities that *Blockchain* offers us as users of the Metaverse
- ◆ Develop Metaverse business models, powered by *Blockchain*
- ◆ Unravel the role of data in the Metaverse
- ◆ Transform *Blockchain* case studies into value for Metaverse users
- ◆ Analyze the value of integrating diverse *Blockchain* case studies into a single environment
- ◆ Assess what the Metaverse means for the new era of the Internet

### Module 2. Advanced Technologies for Metaverse Development

- ◆ Achieve a specialized understanding of the current technological landscape as applied to Web 3.0 and the Metaverse
- ◆ Develop the ability to understand advanced programming concepts
- ◆ Generate specialized knowledge in advanced *Blockchain* concepts
- ◆ Become familiar with the use of development and design environments applied to the video game industry and programming
- ◆ Analyze the wide variety of technologies that can be applied to the Metaverse
- ◆ Assess the possibilities of interconnection between platforms and providers in the Metaverse ecosystem
- ◆ Enhance the projection capacity of current technologies into the future

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

- ◆ 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
- ◆ 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 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
- ◆ Analyze all the factors, areas and opportunities so far raised in the Metaverse idea
- ◆ Be able to react to the social and psychological implications of the Metaverse in the present and to consolidate this knowledge as a basis for future problems in these areas

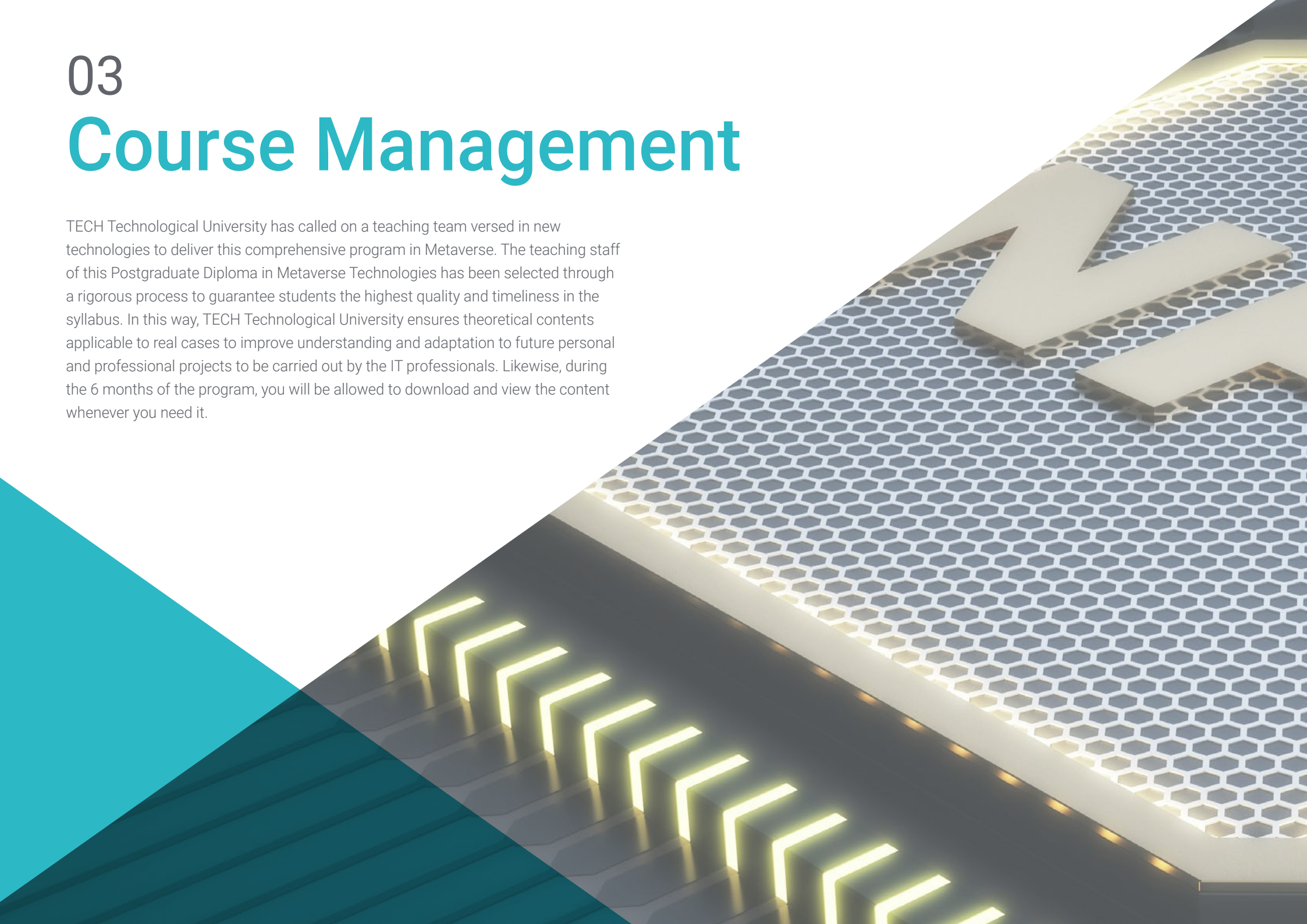


*Don't wait any longer and learn about the new devices and platforms that are present in the development of the digital era and fully understand their multiple advantages"*

03

# Course Management

TECH Technological University has called on a teaching team versed in new technologies to deliver this comprehensive program in Metaverse. The teaching staff of this Postgraduate Diploma in Metaverse Technologies has been selected through a rigorous process to guarantee students the highest quality and timeliness in the syllabus. In this way, TECH Technological University ensures theoretical contents applicable to real cases to improve understanding and adaptation to future personal and professional projects to be carried out by the IT professionals. Likewise, during the 6 months of the program, you will be allowed to download and view the content whenever you need it.



“

*The Metaverse is already a reality. Don't stay behind in modern qualification and learn about the possibilities of 3D reconstruction in the digital world"*

## 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

### Mr. Casero García, Marco Antonio

- ◆ Chief Operating Officer at SecondWorld
- ◆ Event Manager at The Pokémon Company International
- ◆ Manager of Metropolis Ab Alea SL
- ◆ PR Communication 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

# 04

## Structure and Content

The syllabus of this Postgraduate Diploma has been carefully designed by the teaching team and with innovative pedagogical tools that TECH Technological University has applied in all its programs. It is a program designed to teach IT professionals to work in the virtual world. The content of the program is divided into 3 modules, which will allow students to structure their learning and assimilate the concepts by blocks in an orderly manner. The content of the program is divided into 3 modules, which will allow students to structure their learning and assimilate the concepts by blocks in an orderly manner. In addition, TECH Technological University applies the *Relearning* methodology in which students will not have to invest in long hours of memorization, allowing them to assimilate knowledge in a gradual and simple way.







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*Don't wait any longer, count now with the support of a teaching team versed in new Cyberspace Technologies and acquire their strategies"*

## Module 1. *Blockchain*: The Key to Building a Decentralized Metaverse

- 1.1. Bitcoin
  - 1.1.1. Satoshi Nakamoto
  - 1.1.2. Bitcoin's Impact on the Economic, Political and Social Context
  - 1.1.3. Bitcoin Ecosystem: Use Cases
- 1.2. Public or Private Blockchains. New Governance Model
  - 1.2.1. Public or Private *Blockchains*
  - 1.2.2. *Blockchain*. Governance Model
  - 1.2.3. *Blockchain*. Case Studies
- 1.3. *Blockchain*. The Value of Data
  - 1.3.1. Data Value in a New Digital Paradigm
  - 1.3.2. *Blockchain*'s Data and Value Contribution
  - 1.3.3. Advanced Technologies for Working with Governed Data
- 1.4. Metaverse Decentralization and Automation
  - 1.4.1. Decentralization and Automation
  - 1.4.2. Technological Response to User Needs
  - 1.4.3. Businesses of the Future
- 1.5. Metaverse Governance Model through DAOs
  - 1.5.1. DAOs Metaverse Value
  - 1.5.2. DAOs User-Transparent Game Rules
  - 1.5.3. DAOs that Add Value to the Metaverse<sup>3.6</sup>
- 1.6. Digital Asset Ownership, Value and Tokenization
  - 1.6.1. The Value of *Non-Fungible Tokens* (NFTs)
  - 1.6.2. Physical or Virtual Asset Tokenization
  - 1.6.3. Digital Assets in the Metaverse. Case Uses
- 1.7. Metaverse Economy
  - 1.7.1. Storing and Exchanging Value with Cryptocurrencies
  - 1.7.2. User and Organization Business Models
  - 1.7.3. Metaverse Finance Empowered by the *Blockchain*

- 1.8. Digital Identity
  - 1.8.1. Digital Identity Certification
  - 1.8.2. Metaverse Avatars
  - 1.8.3. Digital Identity Users and Organizations
- 1.9. *Smart Contracts*, DApps and the *Cryptoverse*
  - 1.9.1. Real World vs. Virtual World. Activity Reinvention
  - 1.9.2. Decentralized Applications
  - 1.9.3. Applied *Blockchain* to New Universe of Possibilities
- 1.10. The Metaverse New Internet
  - 1.10.1. Reinventing the Internet through the Metaverse
  - 1.10.2. New Economic and Social Environment
  - 1.10.3. Physical and Virtual World Connection

## Module 2. Advanced Technologies for Metaverse Development

- 2.1. State-of-the-art Metaverse Development
  - 2.1.1. Technical Aspects for Web 2.0
  - 2.1.2. Technologies Supporting the Metaverse
  - 2.1.3. Technical Aspects for Web 3.0
- 2.2. Development Environment, Programming Languages and Web 2.0 *Frameworks*
  - 2.2.1. Web 2.0 Development Environment
  - 2.2.2. Web2 Programming Languages
  - 2.2.3. Web2 Frameworks
- 2.3. Development Environment, Programming Languages and Web 3.0 *Frameworks*
  - 2.3.1. Web2 Development Environments
  - 2.3.2. Web2 Programming Languages
  - 2.3.3. Web2 Frameworks



- 2.4. Oracles and *Multichain*
  - 2.4.1. Onchain vs. *Offchain*
  - 2.4.2. Interoperability
  - 2.4.3. Multichain
- 2.5. Graphics Engines and 3D Design Software
  - 2.5.1. CPU vs. GPU
  - 2.5.2. Graphics Engines
  - 2.5.3. 3D Design Software
- 2.6. Devices and Platforms
  - 2.6.1. Video Game Hardware
  - 2.6.2. Platforms
  - 2.6.3. Current Competitive Landscape
- 2.7. *Big Data* and Artificial Intelligence in Metaverse
  - 2.7.1. Data Science Data Transformation into Information
  - 2.7.2. *Big Data*. Data Lifecycle Strategy in the Metaverse
  - 2.7.3. Artificial Intelligence User Experience Personalization
- 2.8. Augmented Reality, Virtual Reality and Mixed Reality in the Metaverse
  - 2.8.1. Alternative Realities
  - 2.8.2. Augmented Reality vs. Virtual reality
  - 2.8.3. Mixed Reality
- 2.9. *Internet of Things* and 3D Reconstruction
  - 2.9.1. 5G and Telecommunication Networks
  - 2.9.2. *Internet of Things*
  - 2.9.3. 3D Reconstruction
- 2.10. The Future of Technology The 2050 Metaverse
  - 2.10.1. Technological Barriers
  - 2.10.2. Development Pathways
  - 2.10.3. The 2050 Metaverse

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

- 3.1. Industry *Players'* Vision of the Metaverse
  - 3.1.1. Metaverse Implementation in Existing Structures
  - 3.1.2. Companies Developing Metaverses
  - 3.1.3. Established Companies in the Metaverse
- 3.2. Metaverse Digital Identity and Social and Ethical Implications
  - 3.2.1. Metaverse Digital Identity
  - 3.2.2. Social Implications
  - 3.2.3. Ethical Implications
- 3.3. Metaverse Beyond *Gaming*
  - 3.3.1. *Gaming* as a Contact Point
  - 3.3.2. Sectors that Are Here to Stay
  - 3.3.3. Reinventing Some Businesses
- 3.4. Metaverse Work and Professional Environment
  - 3.4.1. Metaverse Job Opportunity Identification
  - 3.4.2. New Professional Careers
  - 3.4.3. Current Work Adaptation to the Metaverse
- 3.5. Metaverse Neuromarketing
  - 3.5.1. Metaverse Consumer Behavior
  - 3.5.2. Experience Marketing
  - 3.5.3. Metaverse Neuromarketing Strategies
- 3.6. Metaverse and Cybersecurity
  - 3.6.1. Involved Threats
  - 3.6.2. Metaverse Digital Security Changes Identification
  - 3.6.3. Metaverse Real Cybersecurity
- 3.7. Emotional and Psychological Implications after the Metaverse Experience Good Practices
  - 3.7.1. Adaptation to a New Experience
  - 3.7.2. Side Effects of Metaverse Interaction
  - 3.7.3. Metaverse Best Practices





- 3.8. Adapting Legality to the Metaverse
  - 3.8.1. Legal Challenges Posed by Today's Metaverse
  - 3.8.2. Necessary Legal Changes
  - 3.8.3. Contracts, Intellectual Property and Other Relationship Types
- 3.9. Short-, Medium- and Long-Term *Roadmap* of the Metaverse
  - 3.9.1. Short-Term *Roadmap*
  - 3.9.2. Medium-Term *Roadmap*
  - 3.9.3. Long-Term *Roadmap*
- 3.10. Metaverse, Paradigm of the Future
  - 3.10.1. Unique Growth Opportunity
  - 3.10.2. Metaverse Specialization
  - 3.10.3. Monetization of the Virtual Future

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*What are you waiting for to get all the tools and participate in the digital evolution? Do it now thanks to a rigorous program that focuses on the Metaverse concept”*

# 05 Methodology

This academic program offers students a different way of learning. Our methodology uses a cyclical learning approach: **Relearning**.

This teaching system is used, for example, in the most prestigious medical schools in the world, and major publications such as the **New England Journal of Medicine** have considered it to be one of the most effective.



“

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

## Case Study to contextualize all content

Our program offers a revolutionary approach to developing skills and knowledge. Our goal is to strengthen skills in a changing, competitive, and highly demanding environment.

“

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



*You will have access to a learning system based on repetition, with natural and progressive teaching throughout the entire syllabus.*





*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.



# 06 Certificate

This Postgraduate Diploma in Metaverse Technologies guarantees students, in addition to the most rigorous and up-to-date education, access to a Postgraduate Diploma issued by TECH Technological.



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

This **Postgraduate Diploma in Metaverse Technologies** contains the most complete and up-to-date program on the market.

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

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

Title: **Postgraduate Diploma in Metaverse Technologies**

Official N° of Hours: **450 h.**



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



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



## Postgraduate Diploma Metaverse Technologies

- » Modality: **online**
- » Duration: **6 months**
- » Certificate: **TECH Technological University**
- » Dedication: **16h/week**
- » Schedule: **at your own pace**
- » Exams: **online**

# Postgraduate Diploma Metaverse Technologies

