

# Postgraduate Certificate Virtual, Augmented and Mixed Reality





## Postgraduate Certificate Virtual, Augmented and Mixed Reality

- » Modality: online
- » Duration: 6 weeks
- » Certificate: TECH Global University
- » Credits: 6 ECTS
- » Dedication: 16h/week
- » Schedule: at your own pace
- » Exams: online

Website: [www.techtitute.com/us/artificial-intelligence/postgraduate-certificate/virtual-augmented-mixed-reality](http://www.techtitute.com/us/artificial-intelligence/postgraduate-certificate/virtual-augmented-mixed-reality)

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# 01

# Introduction

Virtual, Augmented and Mixed Reality are completely transforming citizens' physical and visual environments. Through these technologies, companies are able to make their products or services known in an immersive way. In this way, companies create entertaining experiences that allow customers to explore the benefits of the goods. For example, some real estate companies use these tools to offer users virtual tours of homes. As such, organizations run creative marketing campaigns, while differentiating themselves from their main competitors. In this framework, TECH creates an online university program aimed at professionals who want to nurture their praxis with the most innovative strategies for the creation of virtual environments.







“

*With this 100% online Postgraduate Certificate, you will design User Experiences based on their preferences to meet their particular needs”*

A report by a prestigious international consulting firm predicts that Virtual Reality markets will reach approximately \$1.25 billion next year. This document also predicts that the compound annual growth rate of the Extended Reality market will increase to 24.2%. Given this, a wide range of job opportunities are opening up for experts. However, in order for them to take full advantage of them, they need to delve deeper into this immersive technology and incorporate the most advanced strategies in this field into their usual procedures to provide highly creative solutions to clients.

Aware of this reality, TECH is launching a Postgraduate Certificate in Virtual, Augmented and Mixed Reality. Designed by experts in Artificial Intelligence, the curriculum will analyze both the origin and the fundamentals of these technologies. This will allow graduates to have a global vision of how they work, which will lead them to implement these tools in multiple sectors and industries. At the same time, the syllabus will delve into the management of platforms for the creation of virtual environments. In this way, professionals will develop virtual experiences for different purposes, from games to education or professional collaborations. Likewise, the academic materials will delve into various technological devices that will provide immersive experiences, such as Smart Glasses and wearables.

On the other hand, the university program has a 100% online methodology so that alumni can complete the program comfortably. For the analysis of its contents, they will only need an electronic device with Internet access, since the schedules and evaluation chronograms can be planned individually. In addition, the syllabus will be based on the innovative Relearning teaching system that relies on repetition to guarantee the mastery of its different aspects. In addition, in the Virtual Campus, students will have access to a library full of multimedia resources in different formats, to enjoy dynamic learning.

This **Postgraduate Certificate in Virtual, Augmented and Mixed Reality** contains the most complete and up-to-date program on the market. The most important features include:

- ♦ The development of case studies presented by experts in Digital Transformation and Industry 4.0
- ♦ 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 the self-assessment process can be carried out 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



*You will develop innovative projects in a variety of fields, ranging from medicine to entertainment and architecture"*

“

*Are you looking to surprise your clients by creating 360-degree virtual spaces? Achieve it in only 6 weeks thanks to this program”*

The program’s teaching staff includes professionals from the sector who contribute their work experience to this 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 students will be assisted by an innovative interactive video system created by renowned and experienced experts.

*You will skillfully handle wearables to improve productivity and efficiency of wearable devices such as smart watches.*

*Thanks to the Relearning system created by TECH, you will consolidate your knowledge in a fast, natural and accurate way.*

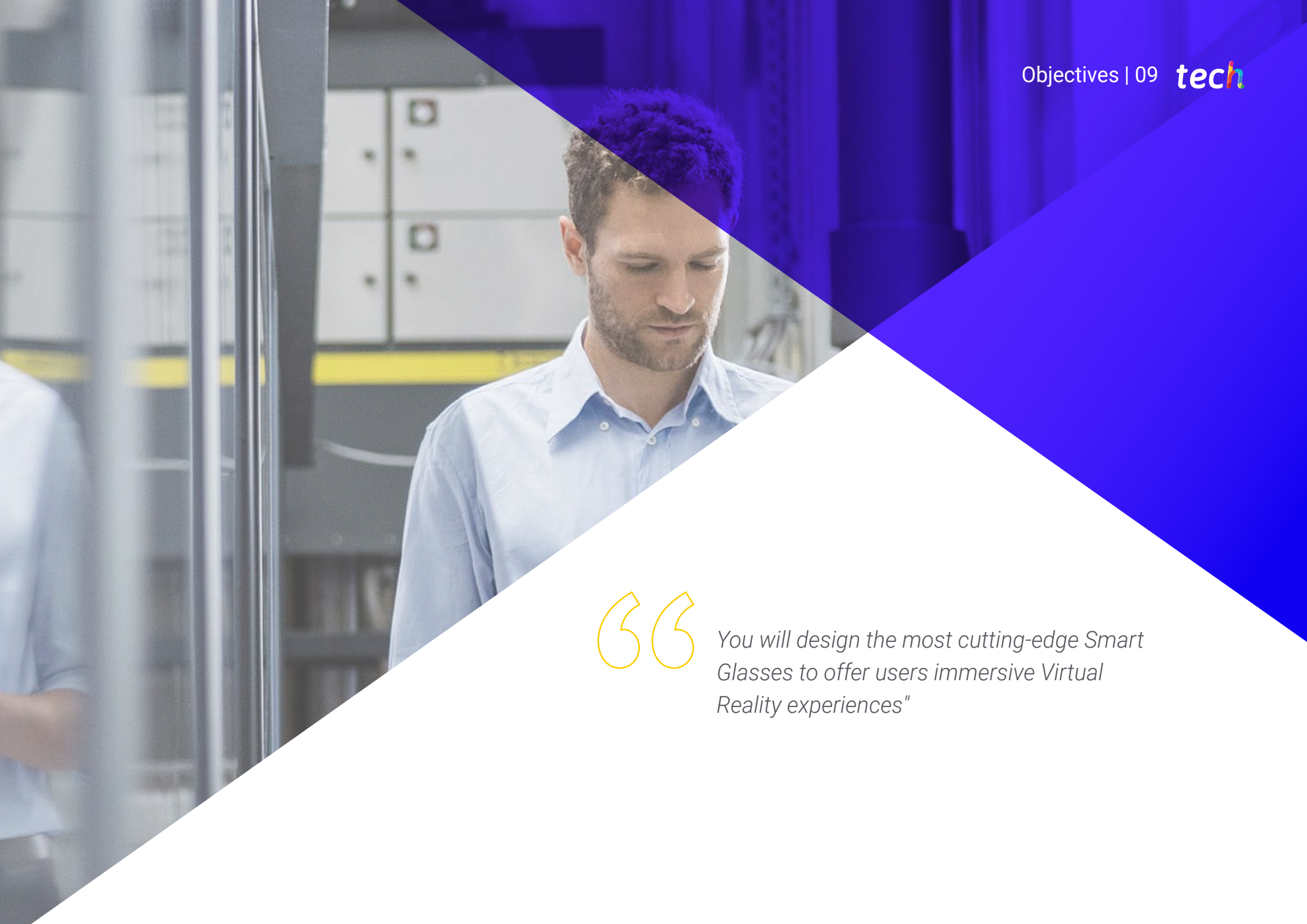


# 02 Objectives

Through 150 teaching hours, graduates will have a high level of understanding of Virtual, Augmented and Mixed Reality. In this way, they will incorporate these emerging technologies into their daily practice to develop highly innovative projects. In this sense, they will master the principles of user-centered design to create accessible and immersive experiences. In this way, professionals will be highly skilled to create virtual worlds using resources such as images or 360-degree videos. At the same time, they will be aware of the future of these technologies in order to take advantage of the opportunities offered by this booming industry.







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*You will design the most cutting-edge Smart Glasses to offer users immersive Virtual Reality experiences”*



## General Objectives

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- ◆ Conduct a comprehensive analysis of the profound transformation and radical paradigm shift being experienced in the current global digitalization process
- ◆ Provide in-depth knowledge and the necessary technological tools to face and lead the technological leap and the challenges currently present in companies
- ◆ Master the digitalization procedures of companies and the automation of their processes to create new fields of wealth in areas such as creativity, innovation and technological efficiency
- ◆ Lead Digital Change





## Specific Objectives

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- Acquire expert knowledge on the characteristics and fundamentals of virtual reality, augmented reality and mixed reality, as well as their differences
- Use applications of each of these technologies and develop solutions with each of them individually and in an integrated manner, combining them to define immersive experiences



*Refresh your knowledge in Holographic Reality through innovative multimedia content, including interactive summaries and real case studies"*



# 03

# Course Management

For the design and delivery of this Postgraduate Certificate, TECH has enlisted the services of a first class teaching staff. These professionals have a solid academic education in the field of Artificial Intelligence, at the same time they have extensive professional experience in prestigious institutions. In this way, they have offered multiple solutions based on emerging technologies such as Virtual, Augmented and Mixed Reality. In this way, students will enjoy an enriching educational experience that will enhance their employability both in the short and long term.





“

*The faculty of this university program has a long history of research and professional application in Artificial Intelligence”*

## Management



### Dr. Segovia Escobar, Pablo

- ♦ Chief Executive of the Defense Sector in the Company TecnoBit of the Oesía Group
- ♦ Corporate Project Director Indra
- ♦ Master's Degree in Companies Administration and Management by the National University of Distance Education
- ♦ Postgraduate in Strategic Management Function
- ♦ Member of: Spanish Association of People with High Intellectual Quotient



### Dr. Diezma López, Pedro

- ♦ Chief Innovation Officer and CEO of Zerintia Technologies
- ♦ Founder of the technology company Acuilae
- ♦ Member of the Kebala Group for business incubation and promotion
- ♦ Consultant for technology companies such as Endesa, Airbus or Telefónica
- ♦ Wearable "Best Initiative" Award in eHealth 2017 and "Best Technological "Solution" 2018 for occupational safety



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*Take the opportunity to learn about the latest advances in this field in order to apply it to your daily practice"*



# 04

## Structure and Content

This Postgraduate Certificate will provide students with the most innovative knowledge of Virtual, Augmented and Mixed Reality. The curriculum will immerse professionals in the current market situation, in order to take advantage of the wide range of opportunities offered by this technological field. At the same time, the syllabus will delve into the creation of 360-degree images, which will allow graduates to build virtual spaces to provide immersive experiences. In this sense, the materials will emphasize the use of devices such as smart glasses or *wearables*. In addition, the course will explore trends and opportunities in this discipline.



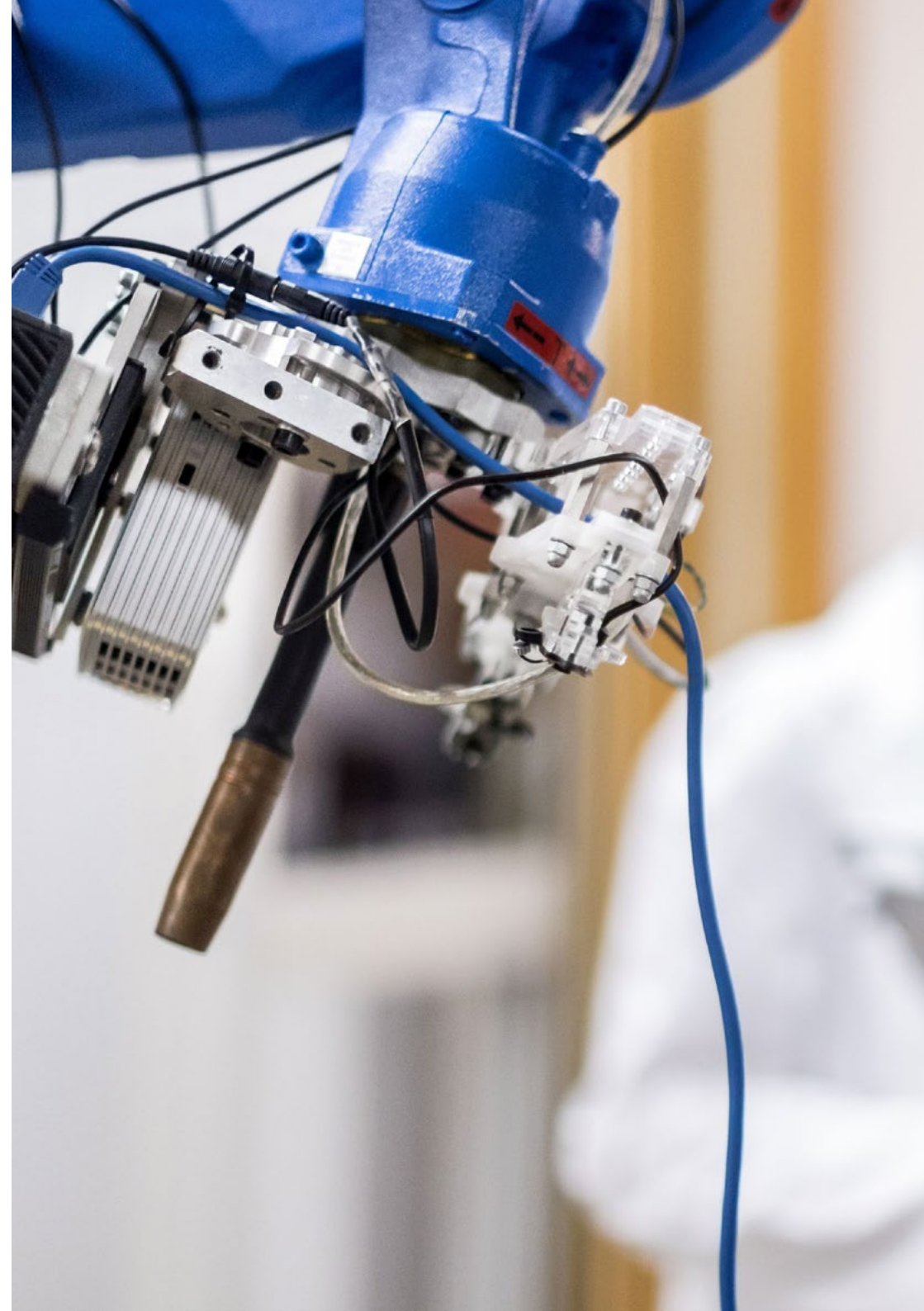


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*A complete syllabus that incorporates all the knowledge you need to take a step towards the highest quality as an engineer in Virtual, Augmented and Mixed Reality"*

## Module 1. Virtual, Augmented and Mixed Reality

- 1.1. Market and Tendencies
  - 1.1.1. Current Market Situation
  - 1.1.2. Reports and Growth by Different Industries
- 1.2. Differences Between Virtual, Augmented and Mixed Reality
  - 1.2.1. Differences Between Immersive Realities
  - 1.2.2. Immersive Reality Typology
- 1.3. Virtual Reality Cases and Uses
  - 1.3.1. Origin and Fundamentals of Virtual Reality
  - 1.3.2. Cases Applied to Different Sectors and Industries
- 1.4. Augmented Reality Cases and Uses
  - 1.4.1. Origin and Fundamentals of Augmented Reality
  - 1.4.2. Cases Applied to Different Sectors and Industries
- 1.5. Mixed and Holographic Reality
  - 1.5.1. Origin, History and Fundamentals of Mixed and Holographic Reality
  - 1.5.2. Cases Applied to Different Sectors and Industries
- 1.6. 360° Photography and Video
  - 1.6.1. Camera Typology
  - 1.6.2. Uses of 360 Images
  - 1.6.3. Creating a Virtual Space in 360 Degrees
- 1.7. Virtual World Creation
  - 1.7.1. Platforms for the Creation of Virtual Environments
  - 1.7.2. Strategies for the Creation of Virtual Environments
- 1.8. User Experience (UX)
  - 1.8.1. Components in the User Experience
  - 1.8.2. Tools for the Creation of User Experiences
- 1.9. Devices and Glasses for Immersive Technologies
  - 1.9.1. Device Typology on the Market
  - 1.9.2. Glasses and *Wearables*: Operation, Models and Uses
  - 1.9.3. Smart Glasses Applications and Evolution
- 1.10. Future Immersive Technologies
  - 1.10.1. Tendencies and Evolution
  - 1.10.2. Challenges and Opportunities





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*TECH offers you a quality and flexible university program. Take it comfortably from your preferred electronic device!”*



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.







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*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

The Postgraduate Certificate in Virtual, Augmented and Mixed Reality guarantees students, in addition to the most rigorous and up-to-date education, access to a Postgraduate Certificate issued by TECH Global University.





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

This program will allow you to obtain your **Postgraduate Certificate in Virtual, Augmented and Mixed Reality** 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 Certificate in Virtual, Augmented and Mixed Reality**

ECTS: **6**

Official N° of Hours: **150 h.**







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