

# Postgraduate Certificate Virtual Reality Art Project and the Unity Graphics Engine





## Postgraduate Certificate Virtual Reality Art Project and the Unity Graphics Engine

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

Website: [www.techtitute.com/us/videogames/postgraduate-certificate/virtual-reality-art-project-unity-graphics-engine](http://www.techtitute.com/us/videogames/postgraduate-certificate/virtual-reality-art-project-unity-graphics-engine)

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# 01

# Introduction

Great titles such as Rick and Morty: Virtual Rick-ality, Job Simulator or The Lab have been created with the Unity Graphics Engine. In this course, the professionals who decide to take a leap in their career in the video game industry should handle this software perfectly and know how to distinguish the main differences between a VR project and one focused strictly on the world of video games. The specialized teaching team, the 100% online modality and the Harvard Case Studies method of this program will provide students with the necessary knowledge to develop themselves in an industry that is increasingly demanding qualified professionals.



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*Succeeding with your artistic project for VR video games with Virtual Reality is closer. Enroll in this Postgraduate Certificate and improve your skills”*

The Postgraduate Certificate in Virtual Reality Art Project and the Unity Graphics Engine allows the professionals to deploy all the artistic knowledge applied to this technology thanks to the mastery of one of the programs most used by the Video Game industry to create 3D titles.

This program deals first of all with the global concept of the Virtual Reality project, knowledge of its advantages, limitations and disparities with other creations in the Video Game world. Also, the specialized teaching team will guide the students through the most used materials in VR games and will detail how to make a correct planning of a title with a guarantee of success.

A 100% online Postgraduate Certificate that opens the possibility for professionals to improve their knowledge wherever and whenever they wish. You only need an internet connection to launch your career in one of the most demanded technological fields.

This **Postgraduate Certificate in Virtual Reality Art Project and the Unity Graphics Engine** 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 Art for Virtual Reality
- ◆ 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



*Master the Unity Graphics Engine and present your next 3D artistic creation for VR Video Games with guaranteed success”*

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*Expand your knowledge and future prospects in a field of VR Video Games that is looking for qualified professionals like you”*

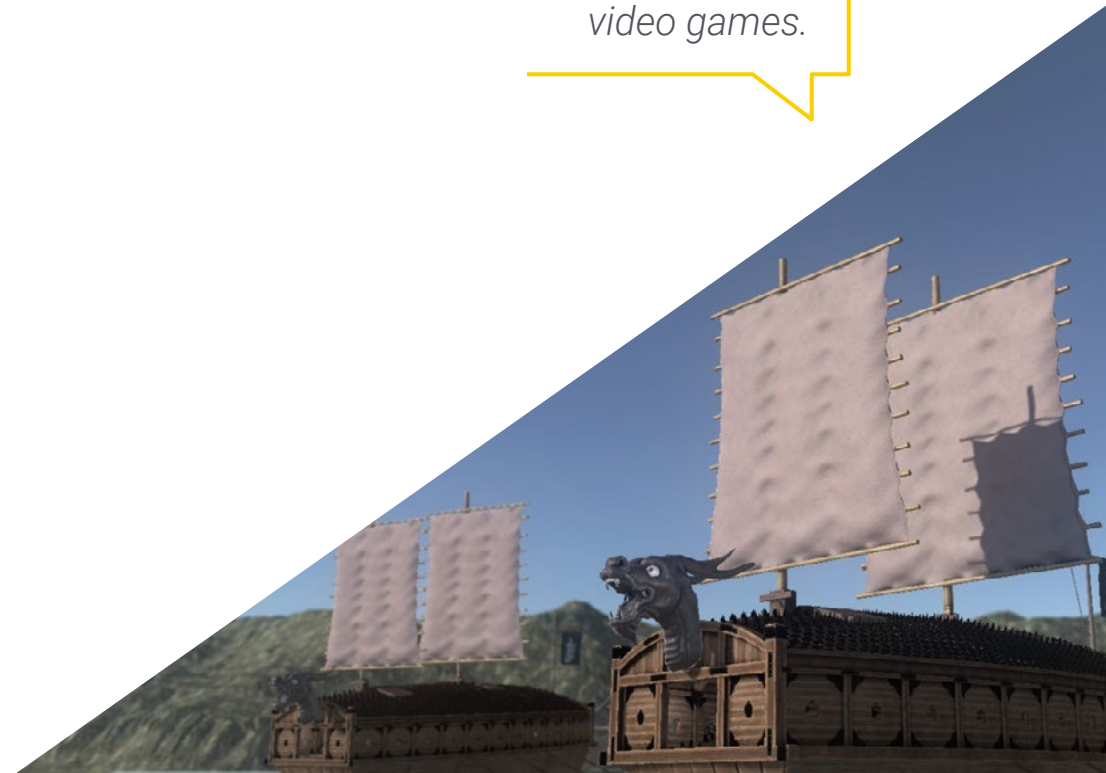
The program's teaching staff includes professionals from the sector who contribute their work experience to this educational program, as well as renowned specialists from leading societies and prestigious universities.

Its multimedia content, developed with the latest educational technology, will allow professionals to learn in a contextual and situated learning environment, i.e., a simulated environment that will provide immersive education programmed to prepare in real situations.

This program's design focuses on Problem-Based Learning, through which the professional must try to solve the different professional practice situations that arise during the academic program. For this purpose, it will be aided by an innovative system of interactive videos produced by renowned experts.

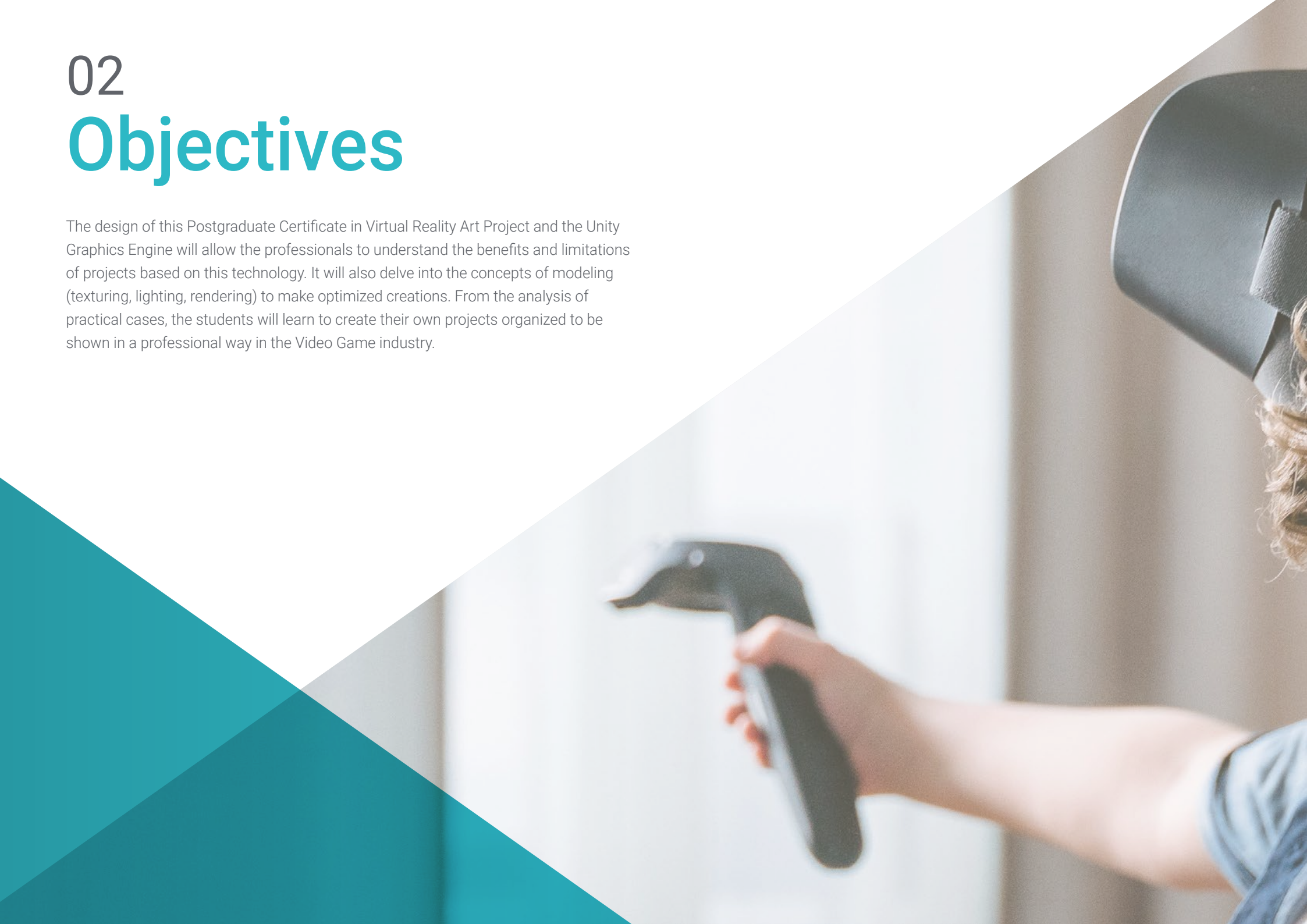
*Improve your knowledge with this Postgraduate Certificate and become part of the big companies in the VR Video Game industry.*

*This Postgraduate Certificate will teach you how to create a quality title in the industry of VR-based video games.*



# 02 Objectives

The design of this Postgraduate Certificate in Virtual Reality Art Project and the Unity Graphics Engine will allow the professionals to understand the benefits and limitations of projects based on this technology. It will also delve into the concepts of modeling (texturing, lighting, rendering) to make optimized creations. From the analysis of practical cases, the students will learn to create their own projects organized to be shown in a professional way in the Video Game industry.







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*The goal of TECH is to launch your professional career in a highly specialized technological field that requires graphic artists like you”*



## General Objectives

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- ◆ Understand the advantages and constraints provided by Virtual Reality
- ◆ Develop high-quality hard surface modeling
- ◆ Create high-quality organic modeling
- ◆ Understand the principles of retopology
- ◆ Understand the principles of UVS
- ◆ Master Baking in Substance Painter
- ◆ Expertly manage layers
- ◆ Be able to create a dossier and submit works at a professional level, at the highest quality
- ◆ Make a conscious decision as to which programs best fit your Pipeline





## Specific Objectives

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- ◆ Develop a VR project
- ◆ Delve into Unity for VR
- ◆ Import textures and implement the necessary materials efficiently
- ◆ Create realistic and optimized lighting

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*You are closer to achieve your goal. The online learning and Relearning methodology of this Postgraduate Certificate will facilitate to reach your objectives”*

03

# Course Management

In order to offer students the best learning experience, TECH Technological University has professionals specialized in the field of design and creation of Virtual Reality oriented games. Their experience in a booming field will allow the professionals to acquire the essential tools to master the Unity Graphics Engine and launch their creations to market with professionalism. The tutoring of the teaching team and the interactive resources will facilitate learning.



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*Specialize with a relevant teaching team in the design and creation of VR Video Games and play on another level in one of the strongest industries”*

## Management



### Mr. Menéndez Menéndez, Antonio Iván

- Senior environment and element artist and 3D consultant at The Glimpse Group VR
- 3D model designer and texture artist at Inmoreality
- Props and environment artist for PS4 games at Rascal Revolt
- Graduated in Fine Arts at the UPV
- Specialist in Graphic Techniques from the University of the Basque Country
- Master's Degree in Sculpture and Digital Modeling by the Voxel School of Madrid
- Master's Degree in Art and Design for Video Games by U-Tad University of Madrid



# 04

# Structure and Content

The syllabus has been designed under the demanding proposals of the faculty of this Postgraduate Certificate which seeks an exquisite and updated learning of the artistic concepts applied to VR Video Games. For this reason, a program has been designed based on global concepts to unravel every detail and element of the Unity Graphics Engine. The extensive multimedia content, complementary readings and real cases support the basis of the solid learning that is acquired in this teaching of TECH Technological University.







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*A curriculum designed to allow you to efficiently plan your project and present it to companies in the VR Video Game industry”*

## Module 1. The Project and the Unity Graphics Engine

- 1.1. The Design
  - 1.1.1. PureRef
  - 1.1.2. Scaling
  - 1.1.3. Differences and Limitations
- 1.2. Project Planning
  - 1.2.1. Modular Planning
  - 1.2.2. Blockout
  - 1.2.3. Assembly
- 1.3. Visualization in Unity
  - 1.3.1. Setting up Unity for Oculus
  - 1.3.2. The Oculus App
  - 1.3.3. Collision and Camera Adjustments
- 1.4. Visualization in Unity: Scene
  - 1.4.1. Setting up Scene for VR
  - 1.4.2. Export of APKs
  - 1.4.3. Installing APKs on Oculus Quest 2
- 1.5. Materials in Unity
  - 1.5.1. Standard
  - 1.5.2. Unlit: Features of This Material and When to Use It
  - 1.5.3. Optimization
- 1.6. Textures in Unity
  - 1.6.1. Importing Textures
  - 1.6.2. Transparency
  - 1.6.3. Sprite
- 1.7. Lighting
  - 1.7.1. VR Lighting
  - 1.7.2. Lighting Menu in Unity
  - 1.7.3. VR Skybox





- 1.8. Lighting: Lightmapping
  - 1.8.1. Lightmapping Settings
  - 1.8.2. Types of Lights
  - 1.8.3. Emissive
- 1.9. Lighting 3: Baking
  - 1.9.1. Baking
  - 1.9.2. Ambient Occlusion
  - 1.9.3. Optimization
- 1.10. Organizing and Exporting
  - 1.10.1. Folders
  - 1.10.2. Prefab
  - 1.10.3. Exporting and Importing Unity Packages

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*A Postgraduate Certificate that will provide you with the keys to make your artistic creations in VR Video Games stand out in a growing field”*

# 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 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 that you are presented with in the case method, an action-oriented learning method. Over the course of 4 years, you will be presented with multiple practical case studies. You will have to combine all your knowledge, and research, argue, and defend your ideas and decisions.

## Relearning Methodology

TECH effectively combines the Case Study methodology with a 100% online learning system based on repetition, which combines 8 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 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 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 Reality Art Project and the Unity Graphics Engine guarantees, in addition to the most rigorous and updated training, access to a Postgraduate Certificate issued by TECH Technological University.



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

This **Postgraduate Certificate in Virtual Reality Art Project and the Unity Graphics Engine** 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 diploma 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 Virtual Reality Art Project and the Unity Graphics Engine**

Official N° of Hours: **150 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  
development language  
virtual classroom



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