

# Postgraduate Certificate

## Organic Environment Creation in Unreal Engine



## Postgraduate Certificate Organic Environment Creation in Unreal Engine

- » Modality: online
- » Duration: 6 weeks
- » Certificate: TECH Technological University
- » Schedule: at your own pace
- » Exams: online

Website: [www.techtitute.com/us/information-technology/postgraduate-certificate/organic-environment-creation-unreal-engine](http://www.techtitute.com/us/information-technology/postgraduate-certificate/organic-environment-creation-unreal-engine)

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# 01

# Introduction

Infinite worlds, realistic and unimaginable worlds are the vast possibilities of creation allowed by the Unreal Engine video game engine. Controlling and mastering all the tools that lead to the creation of first-class organic environments should be one of the main objectives of any professional who wants to thrive in this growing sector. For this reason, TECH has created this 100% online program, which leads students to intensive learning about this software and the creation of projects through the tools for creating atmospheres, plant spaces, texturing and modeling of high quality. All this, in addition, through innovative teaching resources that can be accessed 24 hours a day, from any electronic device with an Internet connection.



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*A 100% online Postgraduate Certificate that will lead you to master the creation of Organic Environments in one of the best current video game engines”*

The Gaming Industry reaches unstoppable numbers of players and turnover for the studios that create the titles that generate the greatest impact. A booming sector that demands increasingly specialized profiles that perfectly master the main softwares for the design of the most advanced projects.

In this context, the infinite possibilities, the high level of realism or the rendering power are just some of the properties that characterize Unreal Engine. One of the best video game engines that anyone who wants to thrive in the industry should certainly control. For this reason, TECH has created this Postgraduate Certificate in Organic Environment Creation in Unreal Engine in an exclusively online format.

It is an intensive program of 150 teaching hours, where the graduate will get the most valuable information to master each and every one of the elements that allow them to create perfect modeling, impeccable texturing and hyper-realistic finishes. With all this, they will be able to increase their technical skills and abilities to create first class spaces and present their work to the most cutting-edge studios.

To achieve this goal, students have access to video summaries of each topic, videos in focus, diagrams, readings and simulations of case studies that will allow them to acquire effective learning. Likewise, with the Relearning system, used by this institution, the long hours of study, so frequent in other teaching methodologies, will be reduced.

Undoubtedly, a unique opportunity to progress through a flexible Postgraduate Certificate that you can access when and where you want. You only need an electronic device with an Internet connection (mobile, tablet or computer) to be able to visualize, at any time, the syllabus of this program. In short, an option that is at the academic forefront.

This **Postgraduate Certificate in Organic Environment Creation in Unreal Engine** contains the most complete and up-to-date program on the market. The most important features include:

- ◆ The development of practical cases presented by experts in Organic Environment Creation in Unreal Engine
- ◆ The graphic, schematic and eminently practical content of the system provides cutting-edge and practical information on those 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



*Do you want to achieve perfect finishes in the design of vegetation for video games? Then this is the right program for you. Enroll now”*



“

*An educational option that gives you the flexibility you need to pursue a quality qualification to advance professionally in the gaming industry”*

The program's teaching staff includes professionals from the field 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 students will be assisted by an innovative interactive video system created by renowned and experienced experts.

*Delve into modeling techniques when you choose to shape the sculpting of the rocky elements that make up your organic scenery.*

*Be the next creator of such outstanding titles as Fornite, Unreal Tournament and Gears of War thanks to this Postgraduate Certificate.*



# 02

# Objectives

Advanced learning that will allow them to successfully develop in the creation of Organic Environments in Unreal Engine. In this way, throughout the 150 teaching hours, students will be able to perfect the techniques used in modeling, as well as the tools for the creation of atmospheres, lighting and the culmination with the most optimal rendering. A process, where you will be tutored by an excellent team specialized in this area.





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*Enhance your technical skills for modeling and texturing the elements that make up your Organic Environment thanks to the teaching resources provided in this program"*



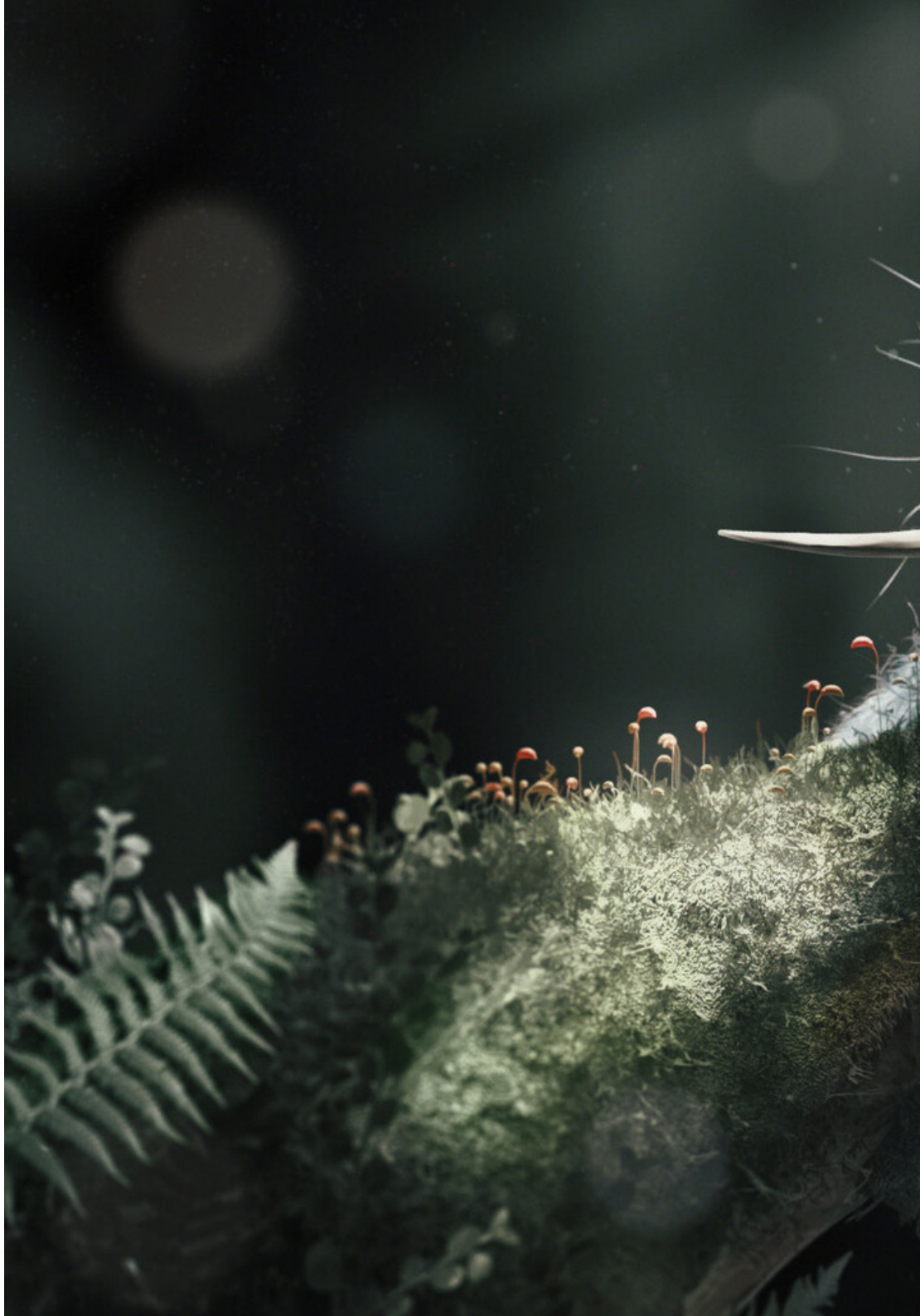
## General Objectives

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- ◆ Master the retopology, UVS and texturing to perfect the models created
- ◆ Create an optimal and dynamic workflow to work more efficiently with 3D modeling
- ◆ Have the skills and knowledge most in demand in the 3D industry to be able to apply for the best jobs

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*Learn how to successfully implement your own scanned designs with this 100% online university program and succeed in the gaming industry”*







## Specific Objectives

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- ◆ Study software functionality and project configuration
- ◆ Delve into the study of PST and the Storytelling of the scene to achieve a good design for our environment
- ◆ Learn the different terrain and organic modeling techniques, as well as the implementation of our own scanned models
- ◆ Delve into the vegetation creation system and how to control it perfectly in Unreal Engine
- ◆ Create different types of texturing of the parts of the project, as well as shading and materials with their corresponding configurations
- ◆ Develop knowledge about the different types of lights, atmospheres, particles and fog, how to place different types of cameras and how to take pictures to have our composition in different ways



# 03

# Course Management

TECH remains committed to offering first level education to all its students. For this reason, it carries out a selection process where the excellent professional background and the human quality of the teachers is a priority. In this way, students who take this program will have the guarantee of having access to an advanced syllabus taught by real specialists in 3D Design and Video Game Animation. In addition, any questions you may have about the content of the subject matter of this Postgraduate Certificate can be solved with the best experts.



“

*Leading game designers will be responsible for offering you the most advanced learning in Organic Environments in Unreal Engine"*



## International Guest Director

Joshua Singh is a leading professional with over 20 years of experience in the video game industry, internationally recognized for his skills in **art direction** and **visual development**. With solid training in **software** such as **Unreal, Unity, Maya, ZBrush, Substance Painter** and **Adobe Photoshop**, he has made a significant mark in the field of **game design**. In addition, his experience spans **visual development** in both 2D and 3D, and is distinguished by his ability to collaboratively and thoughtfully solve problems in **production environments**.

In addition, as **Art Director at Marvel Entertainment**, he has collaborated with and guided elite teams of artists, ensuring that the artwork meets the required quality standards. He has also served as **Lead Character Artist at Proletariat Inc.** where he has created a safe environment for his team and has been responsible for all character assets in **video games**.

With an outstanding track record, including **leadership roles** at companies such as **Wildlife Studios** and **Wavedash Games**, Joshua Singh has been an advocate for artistic development and a mentor to many in the industry. Not to mention his time at large and well-known companies, such as **Blizzard Entertainment** and **Riot Games**, where he has worked as a **Senior Character Artist**. And, among his most relevant projects, stands out for his participation in hugely successful **video games**, including **Marvel's Spider-Man 2, League of Legends** and **Overwatch**.

Thus, his ability to unify the vision of **Product, Engineering and Art** has been fundamental to the success of numerous projects. Beyond his work in the industry, he has shared his experience as an instructor at the prestigious **Gnomon School of VFX** and has been a presenter at renowned events such as the **Tribeca Games Festival** and the **ZBrush Summit**.





## D. Singh, Joshua

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- Art Director at Marvel Entertainment, California, USA
- Lead Character Artist at Proletariat Inc.
- Art Director at Wildlife Studios
- Art Director at Wavedash Games
- Senior Character Artist at Riot Games
- Senior Character Artist at Blizzard Entertainment
- Artist at Iron Lore Entertainment
- 3D Artist at Sensory Sweep Studios
- Senior Artist at Wahoo Studios/Ninja Bee
- General Studies from Dixie State University
- Degree in Graphic Design from Eagle Gate Technical College



*Thanks to TECH you will be able to learn with the best professionals in the world"*

## Management



### Ms. Gómez Sanz, Carla

- Concept Artist, 3D Modeler and Shading in Timeless Games Inc
- Vignettes and animations design consultant for commercial proposals in Spanish multinationals 3D Specialist at Blue Pixel 3D
- Advanced Technician in 3D Animation, video games and interactive environments at CEV School of Communication, Image and Sound
- Master's Degree and Bachelor's Degree in 3D Art, Animation and Visual Effects for video games and cinema at CEV School of Communication, Image and Sound







# 04

# Structure and Content

The syllabus of this Postgraduate Certificate has been designed by specialists versed in the creation of environments using the Unreal Engine video game engine. In this way, the graduate will delve from software configuration, scene design, storytelling, to the most sophisticated techniques for texturing, lighting and rendering. All of this is complemented by an extensive online library available 24 hours a day, 7 days a week.



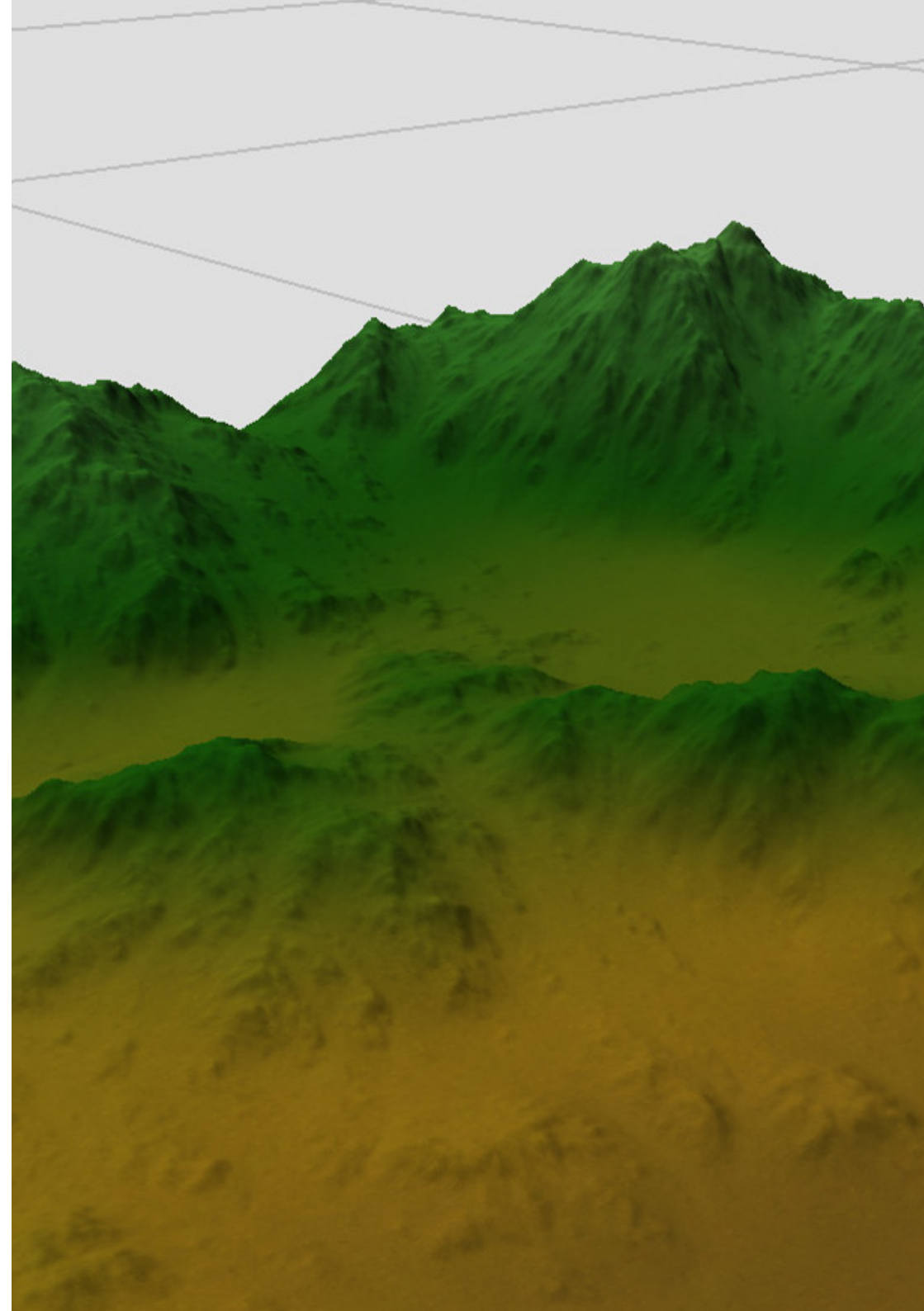
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*Multimedia pills, readings and case studies make up the online library that you can access whenever and wherever you want. Enroll now”*



## Module 1. Organic Environment Creation in Unreal Engine

- 1.1. Unreal Engine Configuration and Project Organization
  - 1.1.1. Interface and Configuration
  - 1.1.2. Folder Organization
  - 1.1.3. Search for Ideas and References
- 1.2. Blocking an Environment in Unreal Engine
  - 1.2.1. Primary, Secondary and Tertiary PST Elements
  - 1.2.2. Scene Design
  - 1.2.3. Storytelling
- 1.3. Terrain Modeling: Unreal Engine and Maya
  - 1.3.1. Unreal Terrain
  - 1.3.2. Terrain Sculpting
  - 1.3.3. Heightmaps: Maya
- 1.4. Modeling Techniques
  - 1.4.1. Rock Sculpting
  - 1.4.2. Rock Brushes
  - 1.4.3. Cliffs and Optimization
- 1.5. Creation of Vegetation
  - 1.5.1. Speedtree Software
  - 1.5.2. Low-Poly Vegetation
  - 1.5.3. Unreal's Foliage System
- 1.6. Texturing in Substance Painter and Mari
  - 1.6.1. Stylized Terrain
  - 1.6.2. Hyper-realistic Texturing
  - 1.6.3. Tips and Guidelines
- 1.7. Photogrammetry
  - 1.7.1. Megascan Library
  - 1.7.2. Agisoft Metashape Software
  - 1.7.3. Model Optimization



- 1.8. Shading and Materials in Unreal Engine
  - 1.8.1. Blending of Textures
  - 1.8.2. Material Settings
  - 1.8.3. Final Touches
- 1.9. Lighting and Post-production of our Environment in Unreal Engine
  - 1.9.1. Scene Look
  - 1.9.2. Types of Lights and Atmospheres
  - 1.9.3. Particles and Fog
- 1.10. Cinematic Rendering
  - 1.10.1. Camera Techniques
  - 1.10.2. Video and Screen Capture
  - 1.10.3. Presentation and Final Finishing

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*You will master with this program the processes for texturing in Substance Painter and Mari”*



# 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

The Postgraduate Certificate in Organic Environment Creation in Unreal Engine guarantees students, in addition to the most rigorous and up-to-date education, access to a Postgraduate Certificate issued by TECH Technological University.





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



This **Postgraduate Certificate in Organic Environment Creation in Unreal 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 Organic Environment Creation in Unreal 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.



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