

# 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
- » Dedication: 16h/week
- » Schedule: at your own pace
- » Exams: online

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

# Index

01

Introduction

---

p. 4

02

Objectives

---

p. 8

03

Course Management

---

p. 12

04

Structure and Content

---

p. 16

05

Methodology

---

p. 20

06

Certificate

---

p. 28

# 01

# Introduction

Video game engines have advanced in recent years, offering continuous updates that further improve the quality of the designs of the protagonists and environments in which they operate. Therefore, designers and creators who aspire to develop the best titles must master Unreal Engine to perfection. Thanks to their knowledge, they will be able to create realistic scenarios and further enhance their creative capabilities with the multiple tools it provides. To achieve this goal, TECH has created this 100% online program that allows students to obtain a high level of knowledge about the processes of modeling, texturing, lighting and rendering so that their project is impeccable. A program that facilitates self-management of study time and provides the most innovative teaching resources.





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*Thanks to this 100% online Postgraduate Certificate you will be able to succeed as a creator and designer in the gaming industry"*

The generation of increasingly realistic, creative and fantastic environments is gaining momentum among the best video game designers and creators. Authentic specialists who have a complete mastery of Unreal Engine, which leads them to create titles that stand out for their quality, excellent definition and innovation.

In this context, it is essential that future professionals in this booming industry are aware of the main tools used for the development of projects, as well as the resolution of the main problems that may arise at different stages. In this sense, TECH has developed this Postgraduate Certificate in Organic Environment Creation in Unreal Engine in an exclusively online format.

It is a program that will take students over 6 weeks to make an intensive learning about the functionality of the software, PST studies, storytelling and the most sophisticated techniques for creating perfect plant environments, proper lighting and texturing. You will also have access to multimedia teaching material, specialized readings to extend the syllabus of this program and case studies, which will give you a much more practical vision.

Also, thanks to the Relearning method, you will be able to advance in a much more natural way through the syllabus and reduce the long hours of study and memorization so frequent in other teaching methodologies.

Undoubtedly, this institution offers the graduate an excellent opportunity to aspire to be part of the main video game creation studios through a flexible and comfortable Postgraduate Certificate. You only need an electronic device with an Internet connection to be able to visualize, at any time, the syllabus of this program. An ideal option to balance daily responsibilities with quality education.

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



*Stand out from the rest of your competitors with a program that will allow you to solve the main problems in the post-production of Organic Environments"*



*Achieve hyperrealism without limits thanks to the mastery of one of the best video game engines in the current market"*

*Be the creator of the next successful video game thanks to this Postgraduate Certificate focused on the mastery of Organic Environments through Unreal Engine.*

*Specialize in Organic Environment Creation and avoid the most frequent mistakes in the design of plant elements thanks to this program.*

The program's teaching staff includes professionals from 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 provide the professional with situated and contextual learning, i.e., a simulated environment that will provide an immersive education programmed to learn in real situations.

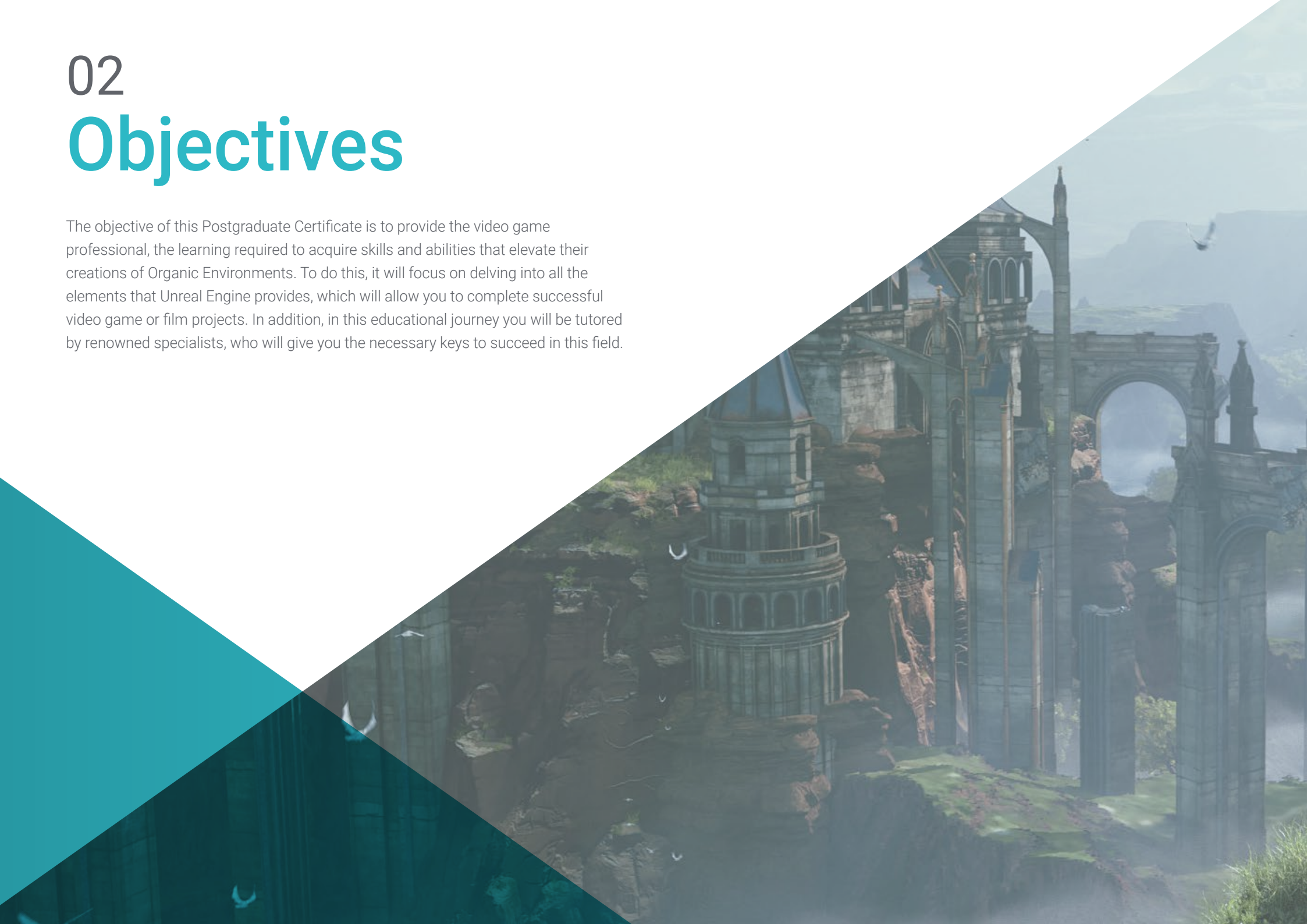
The design of this program focuses on Problem-Based Learning, by means of which the professional must try to solve the different professional practice situations that are presented throughout the academic course. For this purpose, the student will be assisted by an innovative interactive video system created by renowned experts.





# 02 Objectives

The objective of this Postgraduate Certificate is to provide the video game professional, the learning required to acquire skills and abilities that elevate their creations of Organic Environments. To do this, it will focus on delving into all the elements that Unreal Engine provides, which will allow you to complete successful video game or film projects. In addition, in this educational journey you will be tutored by renowned specialists, who will give you the necessary keys to succeed in this field.





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*Follow the excellent guidelines provided by the specialized teaching staff for the creation of atmospheres in your organic scenarios and give a plus to your short films"*



## 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



*Thanks to this program, you will be able to create high-quality environment designs, with the precision required for a professional job in the Video Game sector"*







## 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

In its maxim of offering quality education for all, TECH carries out a careful selection process of each and every one of the teachers who make up the programs. In this way, this academic institution provides students with a quality education that responds directly to their needs to obtain the knowledge that will allow them to progress in the video game industry. Therefore, this Postgraduate Certificate has a teaching staff specialized in 3D design, Video Game Animation and interactive environments. An unparalleled opportunity to advance in a booming industry.





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*You will acquire a first level learning  
through authentic professionals specialized  
in 3D Design and Video Game Animation"*

## Management



### Ms. Gómez Sanz, Carla

- 3D Animation Specialist
- 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 will lead students to obtain the information they need to expand their skills in the creation of organic environments and polish the techniques used in Unreal Engine. To this end, video overviews, in-depth videos and case studies will allow you to gain a much broader perspective of the resources and tools to be used for lighting, modeling creation and final cinematic rendering.



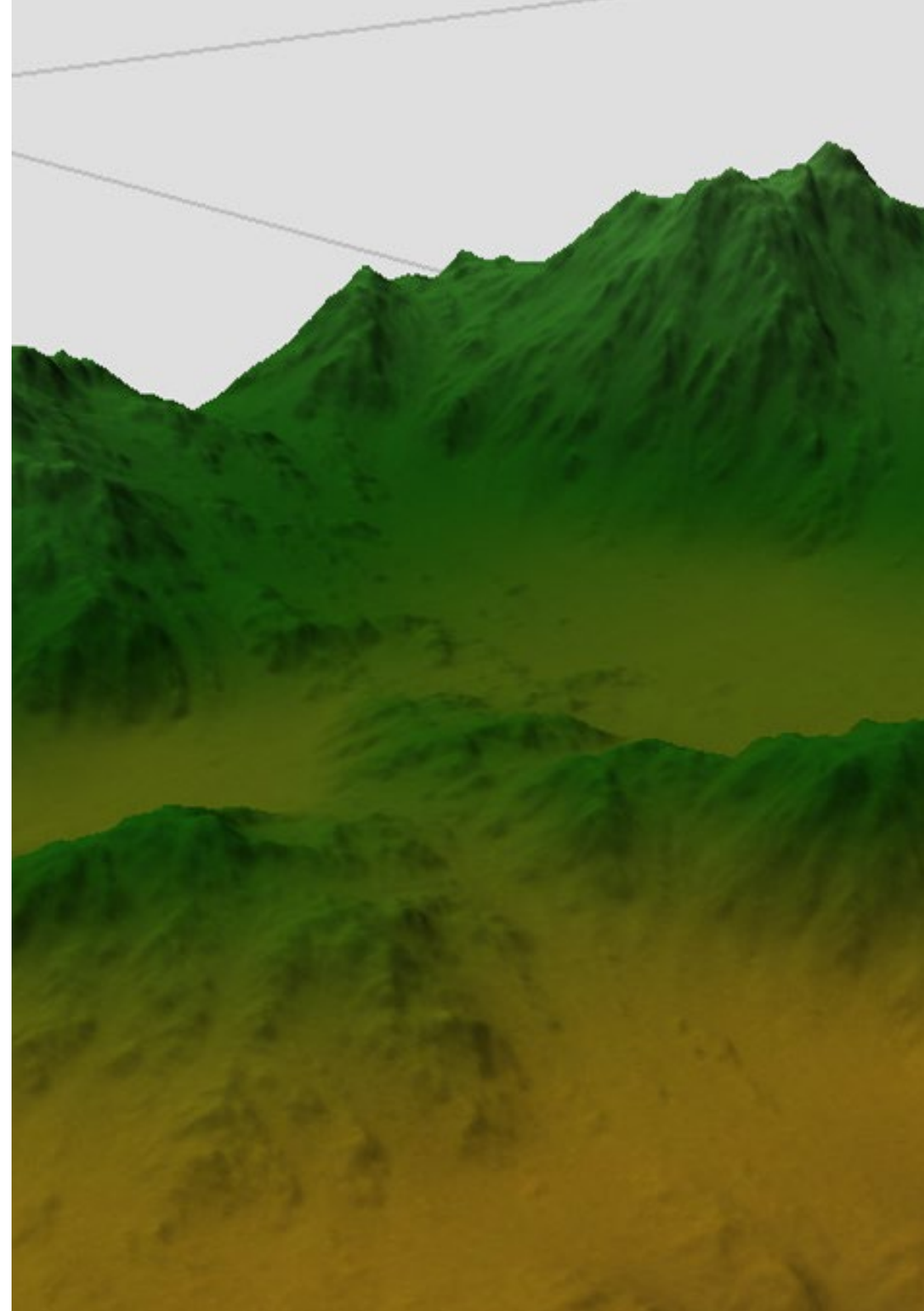


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*A syllabus with a theoretical-practical approach  
that will lead you to elevate your skills for  
modeling environments with Unreal Engine"*

## 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



*You will master all the modeling techniques you need to be able to make sculpted rocks or cliffs that make up part of the scenery for your next project"*



# 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 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.

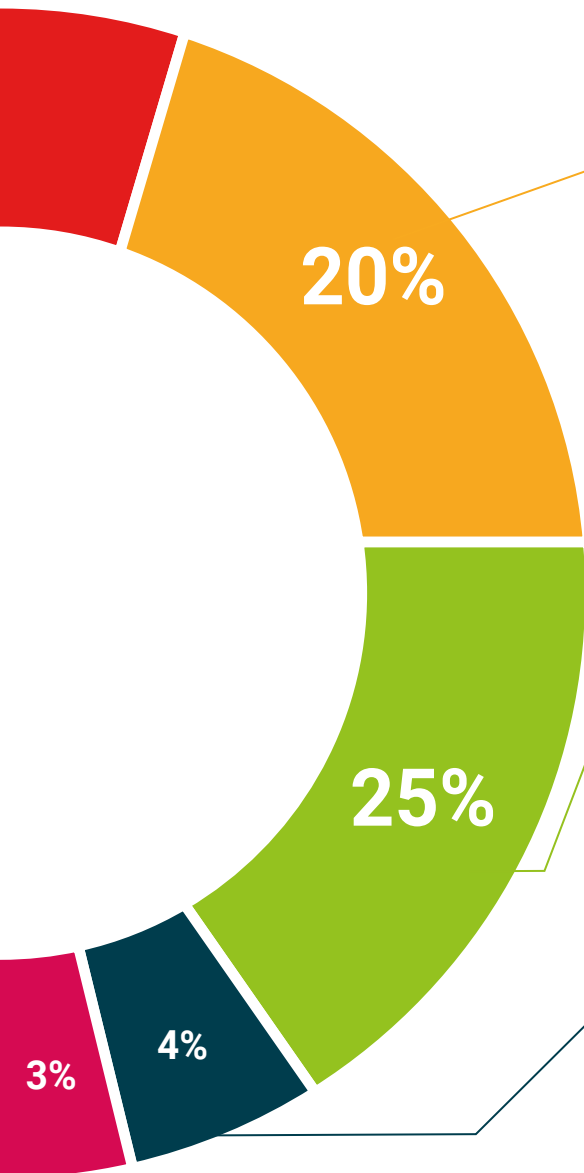


#### Additional Reading

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 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 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 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 certificate issued with an apostille, TECH EDUCATION will make the necessary arrangements to obtain it, at an additional cost.





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