

# 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/design/postgraduate-certificate/organic-environment-creation-unreal-engine](http://www.techtitute.com/us/design/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

The continuous advancement of video game engines has made it possible to elevate the designs made by the best professionals in the industry. An industry that has grown by leaps and bounds and that demands increasingly specialized profiles. In this scenario, it is essential to master one of the most stand out software Unreal Engine. In this way, experts obtain hyper-realistic creations and high-quality finishes. For this reason, TECH has developed this program that leads the students to obtain advanced learning on the most sophisticated modeling, lighting and rendering techniques for the realization of first level Organic Environments. Undoubtedly, an excellent opportunity to take an online program, which provides innovative teaching resources and taught by real specialists in 3D Design and Video Game Animation.



“

*Thanks to this Postgraduate Certificate you will improve your designs of Organic Environments and you will be able to aspire to have your projects included in the most cutting-edge studies"*

The infinite possibilities that game engines currently offer to professional designers open up a wide range of creative possibilities. In this way, based on the most advanced knowledge of the essential software, the specialist ensures that your projects achieve the level of quality expected in a highly demanding Gaming Industry.

Under these criteria titles such as Fornite, Unreal Tournament and Gears of War have achieved success. In order for the students of this Postgraduate Certificate to obtain an excellent progression in this sector, TECH has developed this program in Organic Environments Creation in Unreal Engine.

This is an intensive 6-week program, which will lead the students to delve into lighting techniques, vegetation texturing, terrain modeling or implement the most effective solutions throughout the project creation process. To achieve this goal, this institution also provides pedagogical tools based on detailed videos, video summaries, readings and case studies.

Furthermore, thanks to the Relearning method, the professional will be able to advance through the program in a natural way, consolidating the new concepts acquired and in this way reducing the long hours of study and memorization.

In this way, the graduate will gain knowledge that will increase their chances of progression in the most cutting-edge creative studios in the video game industry. Undoubtedly, a unique opportunity for personal and professional growth through a flexible program that you can take whenever and wherever you want. All you need is an electronic device with an Internet connection to view the syllabus of this program at any time of the day. An cutting-edge educational option in keeping with the current times.

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 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 are looking at an educational option that will expand your possibilities for professional growth in the video game Industry"*

“

*Get a high quality cinematic rendering thanks to the techniques shown in this 100% online program”*

The program's teaching staff includes professionals from the sector who bring to this program the experience of their work, in addition to recognized specialists from prestigious reference societies and 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 educational year. For this purpose, the students will be assisted by an innovative interactive video system created by renowned and experienced experts.

*Enroll now in a flexible program, which you can access comfortably from your cell phone with Internet connection.*

*Learn how to master the inclusion of all kinds of lights, atmospheres and fog effects to the scenery of your next videogame.*



# 02

# Objectives

Upon completion of this university program, the future designer will have obtained the knowledge needed to perfect their skills and abilities in the Organic Environment Creation in Unreal Engine. A goal that you will achieve throughout the 6 weeks of this program and that will mean a leap in quality to your projects. A unique opportunity for career progression in the gaming sector that only TECH offers.





“

*Integrate the main tricks that this program brings you to solve the main problems in the realization of modeling Organic Environments”*



## General Objectives

---

- ♦ 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



*Master the main techniques that will allow you to texture all the pieces that make up your project"*





## Specific Objectives

---

- ◆ 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

The faculty of this Postgraduate Certificate is made up of specialists who have extensive professional experience as designers and creators of video games. They are versed in this subject, and all their knowledge is included in a syllabus that will allow the students to acquire a first level learning. In addition, any questions that the graduate may have about the content of this program can be answered by the excellent team of experts who teach this program.



“

*Succeed with the best specialists  
in 3D Design, Animation and  
Interactive Environments”*

## 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

---

- 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

- 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

TECH is aware of the importance of mastering the technique and the best software for the creation of the most spectacular designs in the world of video games. That is why it has created a syllabus oriented to know each and every one of the resources and tools provided by Unreal Engine for the creation of high quality Organic Environments. This excellent syllabus is complemented by the virtual library to which you will have access 24 hours a day, 7 days a week.



“

*A syllabus designed to elevate your creative abilities and create spaces for the most impactful titles in the Gaming Industry”*

## 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

“ *Present first level finishes of your Organic Environments projects and progress in the videogame industry thanks to TECH*”



# 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 is the most widely used learning system in the best faculties in the world. 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 we face in the case method, an action-oriented learning method. Throughout the program, the studies 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 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.

With this methodology we have 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, markets, and financial 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.

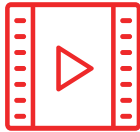
*Relearning will allow you to learn with less effort and better performance, involving you more in your training, developing a critical mindset, defending arguments, and contrasting opinions: a direct equation for success.*

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.



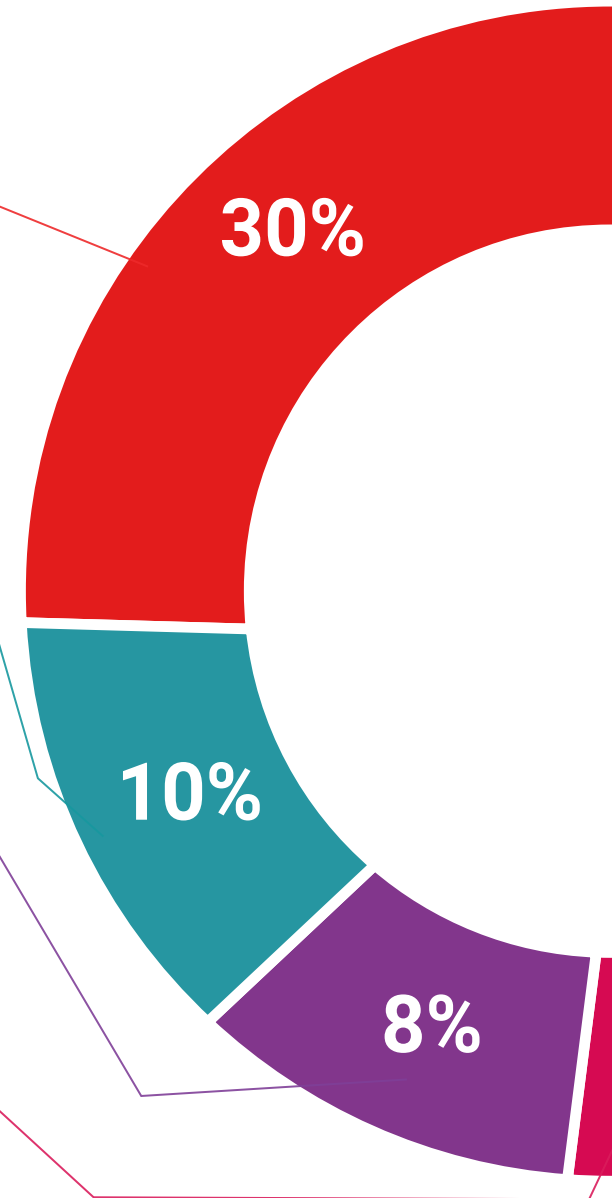
### Practising Skills and Abilities

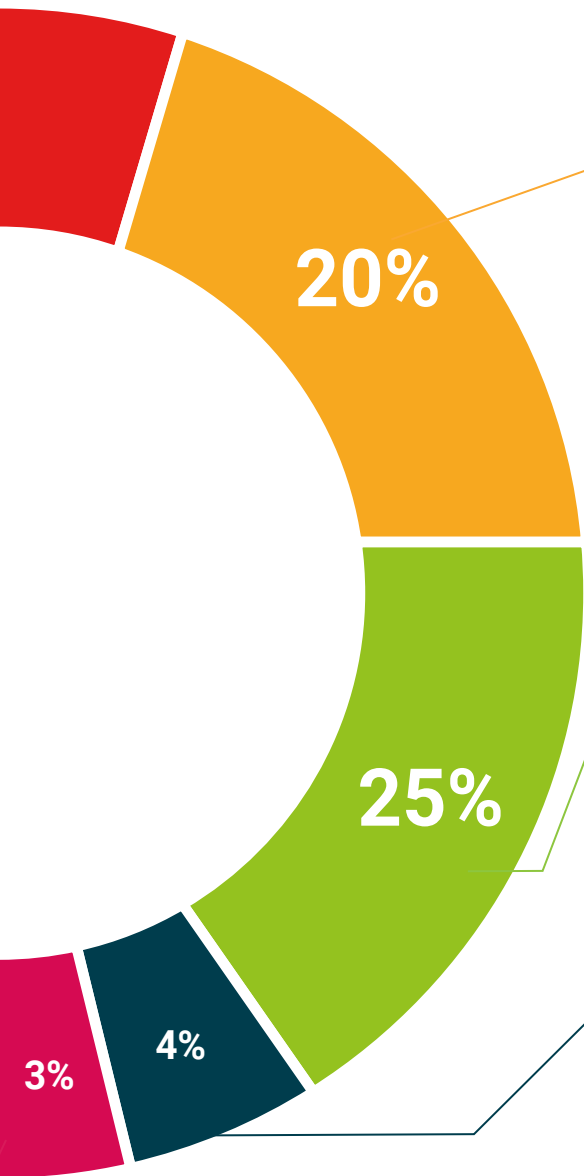
They will carry out activities to develop specific competencies and skills in each thematic area. Exercises and activities to acquire and develop the skills and abilities that a specialist needs to develop in the context of the globalization that we are experiencing.



### 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.



“

*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.



future

health confidence people

education information tutors

guarantee accreditation teaching

institutions technology learning

community commitment

personalized service innovation

knowledge present

online training

development languages

virtual classroom

**tech** technological  
university

Postgraduate Certificate  
Organic Environment  
Creation in Unreal Engine

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

# Postgraduate Certificate

## Organic Environment Creation in Unreal Engine