

# Postgraduate Certificate

## Creation of Organic Landscapes and Environments with Digital Sculpture



## Postgraduate Certificate Creation of Organic Landscapes and Environments with Digital Sculpture

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

Website: [www.techtute.com/us/information-technology/postgraduate-certificate/creation-organic-landscapes-environments-digital-sculpture](http://www.techtute.com/us/information-technology/postgraduate-certificate/creation-organic-landscapes-environments-digital-sculpture)

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# 01

# Introduction

The creation of terrains and environments within a scenography, usually applied to animation and design, is a process that determines the final quality of the modeling. That is to say, the modeler, animator or designer behind this elaboration must make sure that the whole production as a whole complies with the desired aesthetics and finish. Organic modeling is a complex process, since it depends on it that the result is more or less natural, depending on the techniques applied. This educational plan focuses on providing students with the necessary tools and utilities for the creation of such terrains and organic environments through digital sculpture. It is a completely online program that allows in just 6 weeks to get the necessary notions to develop a good landscape modeling.



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*Achieve the most optimal results in the creation of organic landscapes and environments through digital sculpting thanks to this online program”*

This Postgraduate Certificate in the Creation of Landscapes and Organic Environments with Digital Sculpture ensures that graduates know the differences between techniques that allow organic modeling and fractal systems for the generation of elements of nature and terrains, as well as the implementation of their own models and 3D scans.

This complete educational plan takes a journey through different sections that contemplate delving into the vegetation creation system and how to control it professionally in Unity and Unreal Engine, as well as how to create scenes with immersive experiences in VR. The areas of study also include the analysis of terrain, vegetation and other elements that interfere with the physics and realism of winds and fluids.

A direct qualification that has a direct accreditation system, which means that it is not necessary to submit a project or final project to obtain the certificate. Likewise, with the Relearning and Learning by Doing methodology, students acquire knowledge progressively and at their own pace.

This **Postgraduate Certificate in Creation of Organic Landscapes and Environments with Digital Sculpture** 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 3D modeling and digital sculpture
- ◆ The graphic, schematic, and practical contents with which they are created, provide scientific and 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



*This educational program has an expert faculty in the field of three-dimensional modeling and digital sculpture"*



*This Postgraduate Certificate is taught in an online format to make it easier to balance learning with other professional or personal projects”*

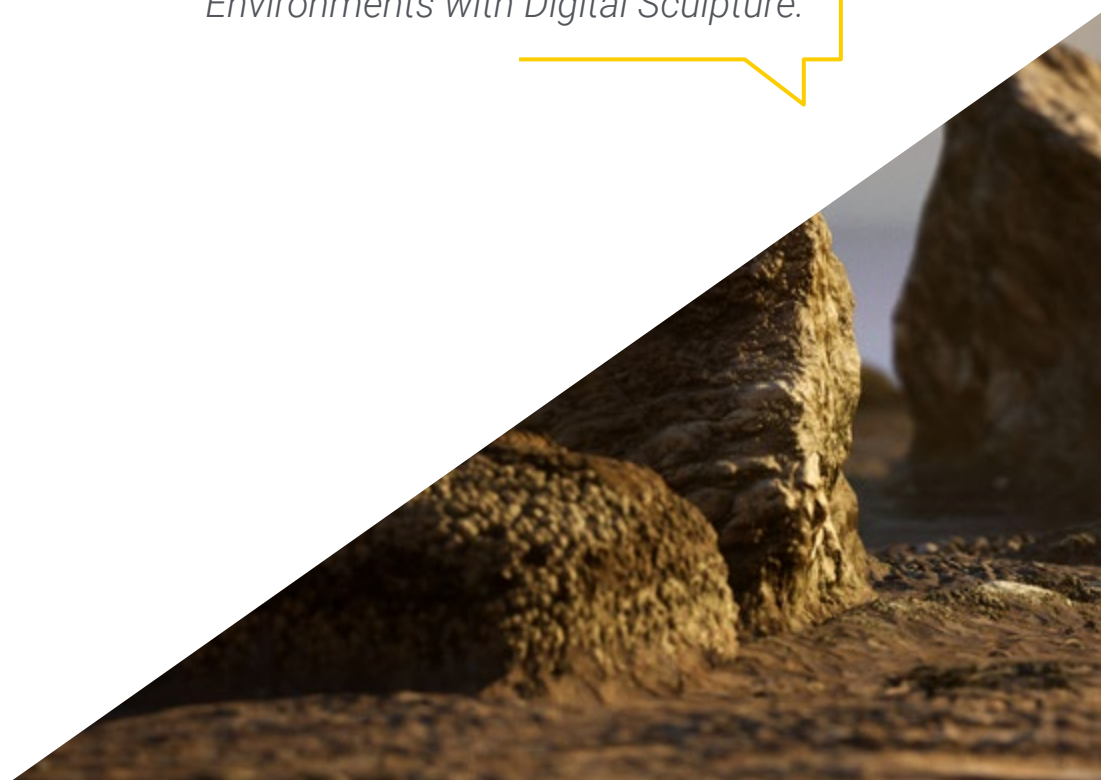
The program’s teaching staff includes professionals from sector who contribute their work experience to this program, as well as renowned specialists from leading societies and prestigious universities.

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 professionals must try to solve the different professional practice situations that arise during the academic year. For this purpose, the student will be assisted by an innovative interactive video system created by renowned and experienced experts.

*Learn, with Relearning and Learning by Doing methodology, to acquire knowledge progressively and at your own pace.*

*Acquire knowledge in the most advanced techniques in the Creation of Organic Landscapes and Environments with Digital Sculpture.*



# 02 Objectives

Get the best process in modeling, texturing, lighting and rendering of terrain and organic environments, is the goal of this online training. Thanks to this complete educational plan, it is possible to develop spaces using organic modeling full of creativity and hyperrealism, as well as to know the need for a good topology at all levels of development and production of landscapes. In addition, it delves into the use of specific tools such as: Unreal Engine or Unity.







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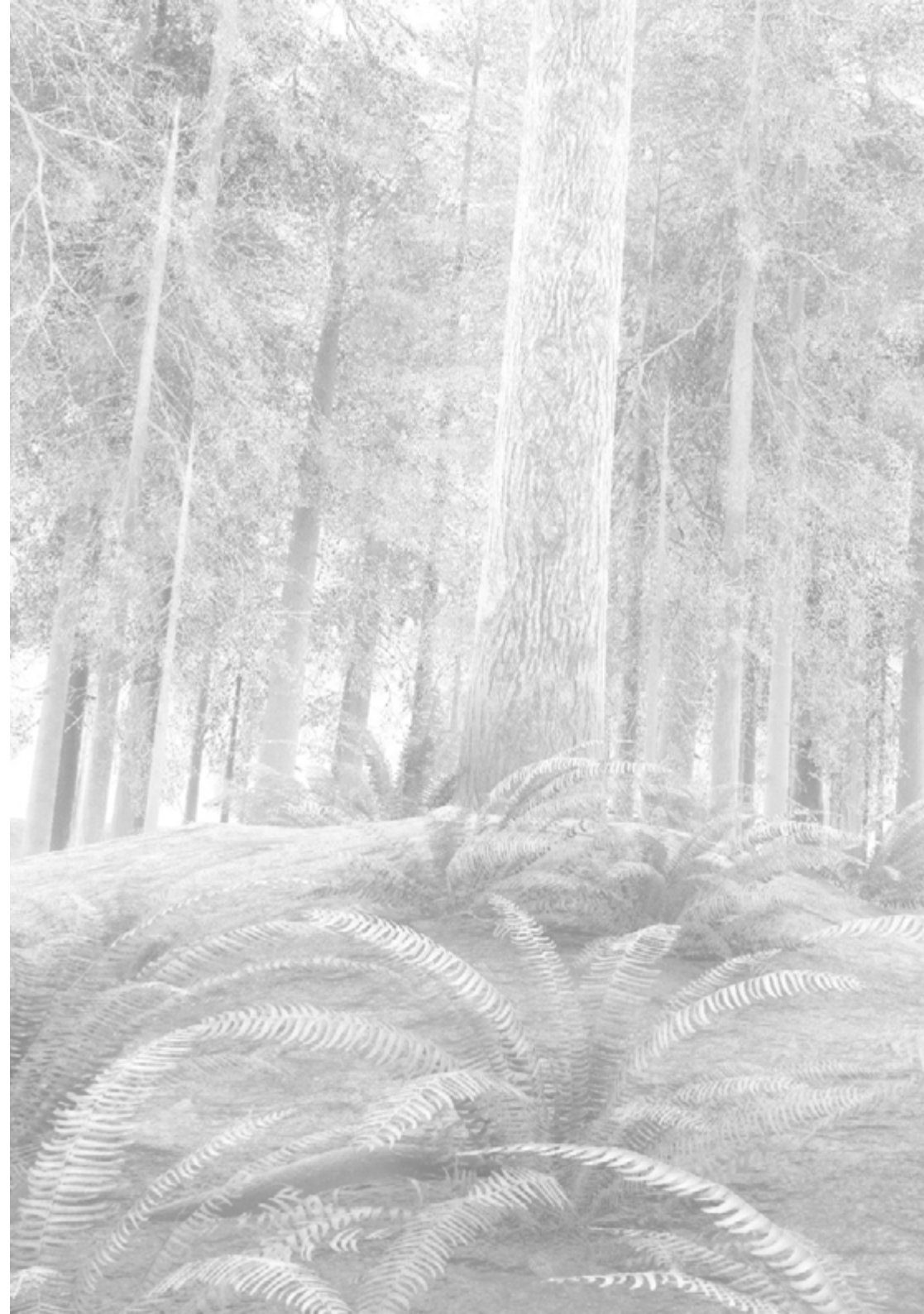
*Develop your creativity by designing hyper-realistic landscapes and terrains using the organic modeling technique”*



## General Objectives

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- ◆ Apply modeling, texturing, lighting and rendering processes accurately.
- ◆ Develop spaces using the organic model full of creativity and hyper-realism
- ◆ Understand the need for good topology at all levels of development and production
- ◆ Understand current film and video game industry systems to deliver great results





## Specific Objectives

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- ◆ Know the different techniques of organic modeling and fractal systems for generating the elements of nature and terrain, as well as the implementation of our own models and 3D scans
- ◆ Delve into the vegetation creation system and how to control it professionally in Unity and Unreal Engine
- ◆ Create scenes with immersive VR experiences

“

*Enroll now and become an expert in terrain modeling and organic environments in just 6 weeks”*

# 03

# Course Management

This program has a management and teaching staff made up of true experts in the field of digital sculpture and 3D modeling. They are highly prestigious professionals who have dedicated a large part of their careers to researching and developing the best modeling, texturing, rendering and lighting techniques. They will not only teach theoretical and practical knowledge to students, but will also enhance their skills and abilities, as well as their professional criteria, to successfully face professional challenges.





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*Enhance your professional skills and abilities with the support of the faculty providing this program”*

## Management



### Mr. Sequeros Rodríguez, Salvador

- Specialist in Digital Sculpture
- Concept Art and 3D Models for Slicecore (Chicago)
- Videomapping and modeling for Rodrigo Tamariz (Valladolid)
- Restorer at Geocisa
- Professor of Higher-Level Training Cycle in 3D Animation. Higher Education School of Image and Sound ESISV. Valladolid
- Professor of Higher-Level Training Cycle GFSG in 3D Animation. European Institute of Design IED Madrid
- Degree in Fine Arts from the University of Salamanca, specializing in Design and Sculpture
- Master's Degree in Computer Graphics, Games and Virtual Reality from the URJC University of Madrid



# 04

# Structure and Content

The content of this program has been developed and designed by TECH so that students acquire the knowledge in an autonomous way, develop the learning of techniques and tools used today and are able to create organic landscapes and environments with digital sculpture. In only 6 weeks, through *Relearning* and *Learning by Doing* methodology, students acquire, at their own pace, the best skills for modeling, texturing, lighting and rendering landscapes.







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*Learn, at your own pace, how to create organic landscapes and terrains. Unleash your imagination with this online qualification”*

## Module 1. Creation of Organic Terrains and Environments

- 1.1. Organic Modeling in Nature
  - 1.1.1. Brush Adaptations
  - 1.1.2. Creation of Rocks and Cliffs
  - 1.1.3. Integration with 3D *Substance Painter*
- 1.2. Terrain
  - 1.2.1. Terrain Displacement Maps
  - 1.2.2. Creation of Rocks and Cliffs
  - 1.2.3. Scanning Software Libraries
- 1.3. Vegetation
  - 1.3.1. *SpeedTree*
  - 1.3.2. *Low-Poly* Vegetation
  - 1.3.3. Fractals
- 1.4. *Unity Terrain*
  - 1.4.1. Organic Model of Terrain
  - 1.4.2. Terrain Painting
  - 1.4.3. Creation of Vegetation
- 1.5. *Unreal Terrain*
  - 1.5.1. *Heightmap*
  - 1.5.2. Texturing
  - 1.5.3. *Unreal's Foliage System*
- 1.6. Physics and Realism
  - 1.6.1. Physical
  - 1.6.2. Wind
  - 1.6.3. Fluids
- 1.7. Virtual Walks
  - 1.7.1. Virtual Cameras
  - 1.7.2. Third Person
  - 1.7.3. First Person FPS



- 1.8. Cinematography
  - 1.8.1. *Cinemachine*
  - 1.8.2. *Sequencer*
  - 1.8.3. Recording and Executables
- 1.9. Visualization of the Model in Virtual Reality
  - 1.9.1. Modeling and Texturing Tips
  - 1.9.2. Exploitation of the Interaxial Space
  - 1.9.3. Project Preparation
- 1.10. VR Scene Creation
  - 1.10.1. Location of the Cameras
  - 1.10.2. Land and Infoarchitecture
  - 1.10.3. Parameters of Use



*Haven't you decided yet? This is the most flexible, convenient and practical Postgraduate Certificate in Creation of Organic Landscapes and Environments with Digital Sculpture that you will find in the academic market"*



# 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.

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*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.*



### 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 student will learn to solve complex situations in real business environments through collaborative activities and real cases.*

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.





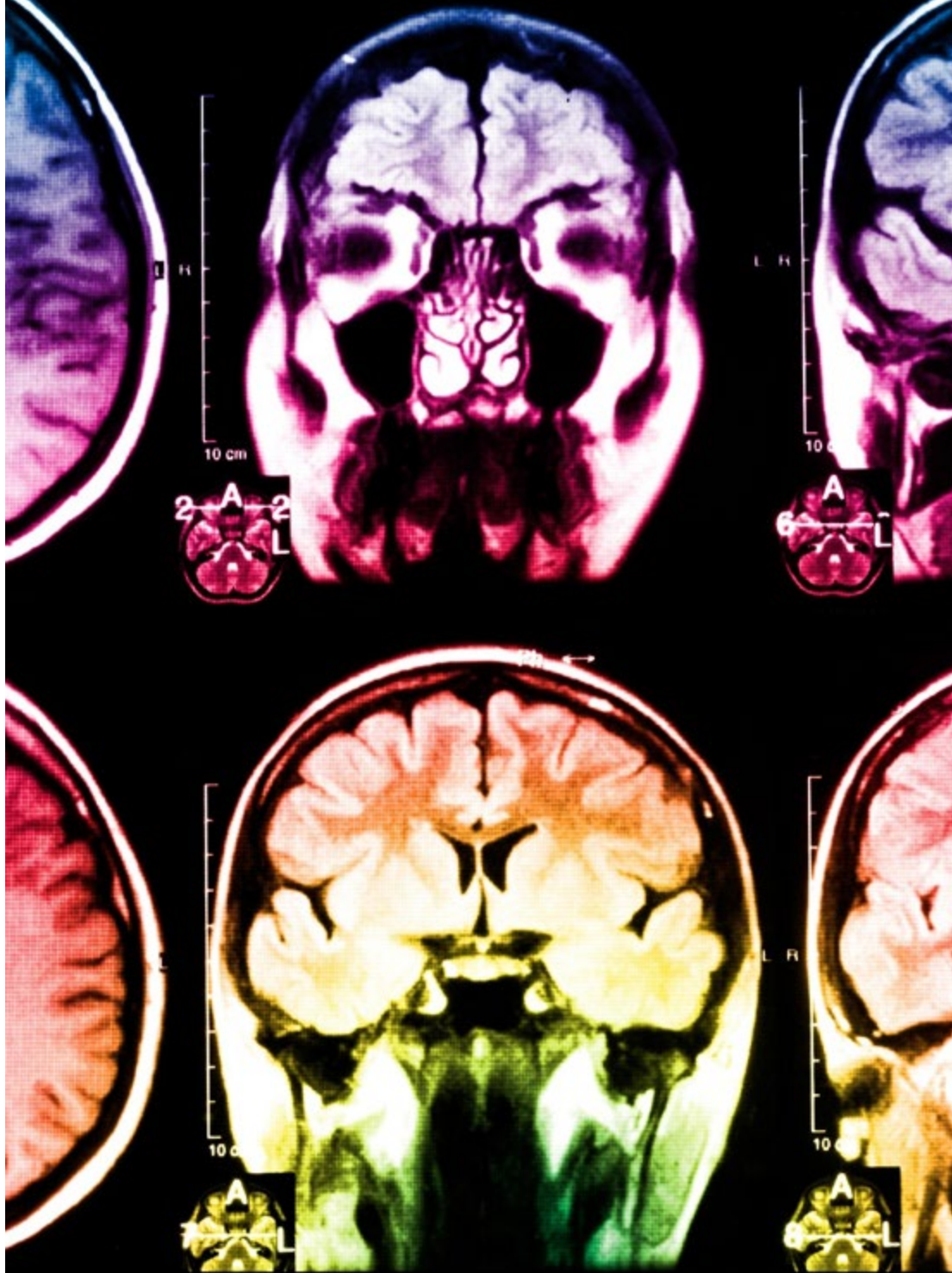
In our program, learning is not a linear process, but rather a spiral (learn, unlearn, forget, and re-learn). Therefore, we combine each of these elements concentrically.

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.

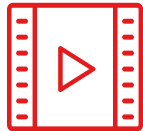
*Relearning will allow you to learn with less effort and better performance, involving you more in your training, developing a critical mindset, defending arguments, and contrasting opinions: a direct equation for success.*

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 adapted in 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.



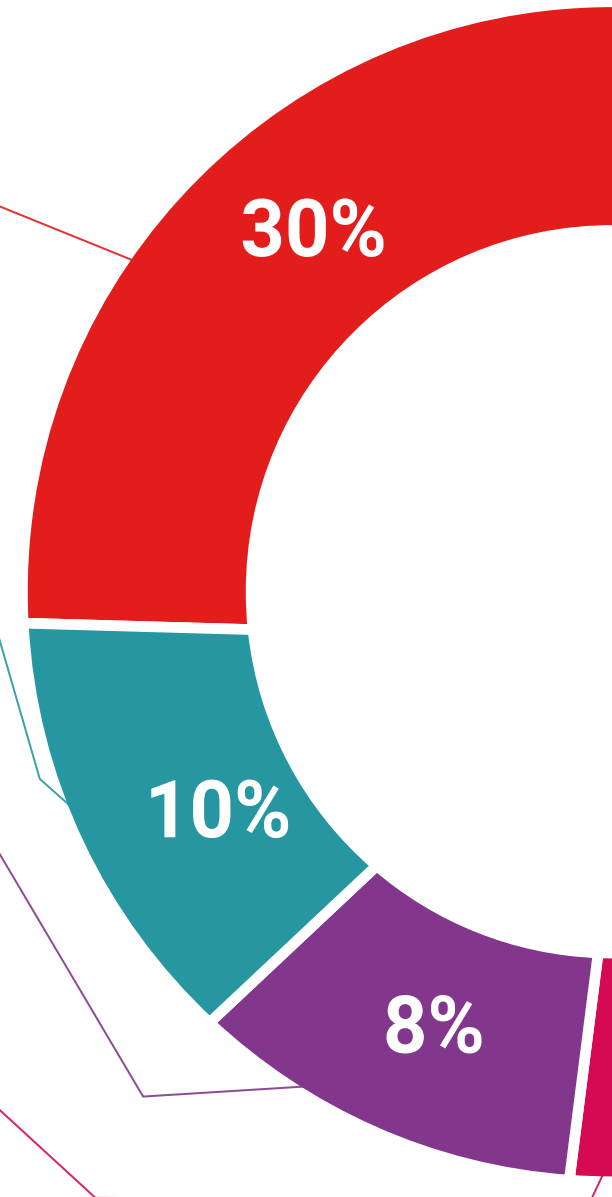
### Practising Skills and Abilities

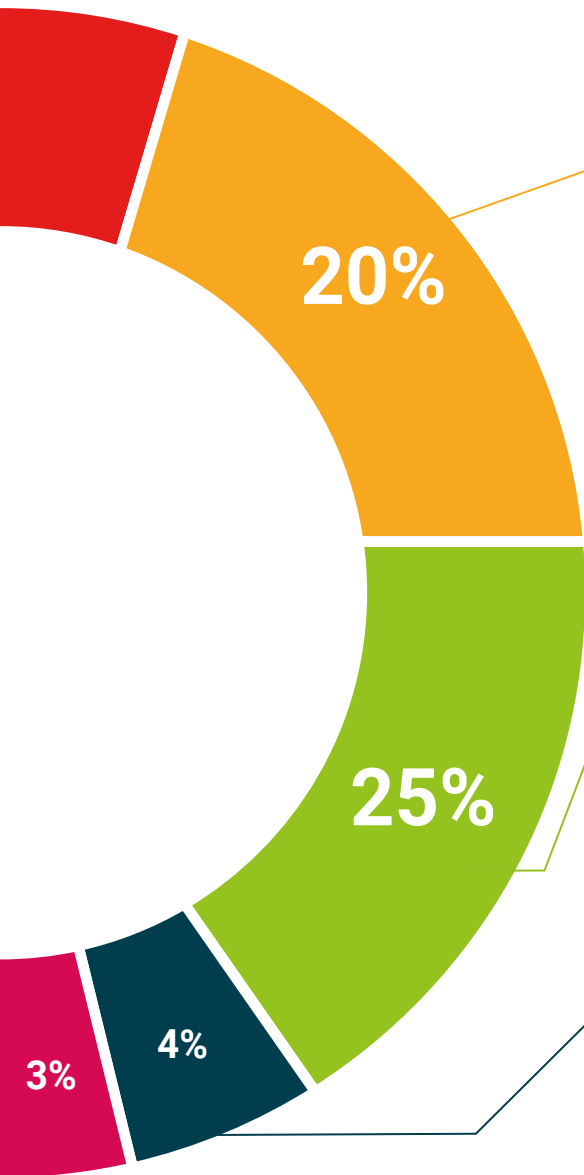
They will carry out activities to develop specific competencies and skills in each thematic area. Exercises and activities to acquire and develop the skills and abilities that a specialist needs to develop in the context of the globalization that we are experiencing.



### 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 Creation of Organic Landscapes and Environments with Digital Sculpture guarantees students, in addition to the most rigorous and up-to-date education, access to a Postgraduate Certificate issued by TECH Global University.



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*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 Creation of Organic Landscapes and Environments with Digital Sculpture** 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 Creation of Organic Landscapes and Environments with Digital Sculpture**

Modality: **online**

Duration: **6 weeks**

Accreditation: **6 ECTS**



\*Apostille Convention. In the event that the student wishes to have their paper diploma issued with an apostille, TECH Global University will make the necessary arrangements to obtain it, at an additional cost.



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