Postgraduate Diploma

Creation of Organic Landscapes and Environments Through Digital Sculpture

tech technological university

Postgraduate Diploma
Creation of Organic Landscapes and Environments Through Digital Sculpture

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

Website: **www.techtitute.com/pk/videogames/postgraduate-diploma/postgraduate-diploma-creation-organic-landscapes-environments-digital-sculpture**

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01
Introduction

The implementation of digital sculpture in the creative process of video games, has allowed for the improvement of graphic quality in the virtual environments and characters that make up the games. Developing terrains is one of the most interesting specializations; modeling the landscapes created for character movement allows for truly interactive projects. The professional immersed in this world needs constant training in order to be kept up-to-date and perform in an outstanding way; therefore, this program contains all the knowledge required for the Creation of Landscapes and Organic Environments through Digital Sculpture, through its 100% online format and in a maximum of 6 months.

You will master the most commonly used sculpting techniques in today's modeling and gain knowledge of powerful programs such as ZBrush, Lumion and 3ds Max"

Currently, 3D modeling is one of the computer graphics techniques that has had the most impact in recent years thanks to 3D printing, three-dimensional scanning, video game engines or milling. This has led to it being used in a wide range of fields such as vehicle creation, fashion, architecture, medicine, film, video games, jewelry and an endless number of other media. Mastering the different techniques most used in current modeling and integrating them with each other, provides an excellent professional background for creative development as a professional in digital sculpture for video games.

Professionalization provides individuals with added value, and is undoubtedly a growing focus in the most in-demand work environments. In this Postgraduate Diploma in the Creation of Landscapes and Organic Environments through Digital Sculpture, the student will grasp the different artistic concepts, photorealistic detail and reliability to successfully develop quality projects.

They will learn among other things, the use of masks and conformation of works through organic modeling in *ZBrush*, in order to provide quality detail and integrate them into a pioneering program like *Lumion*. They will understand the use of texturing and modeling, as well as the generation of PBR texture maps and materials, to generate functional works in the video game industry. Not to mention, innovative systems such as VR sculpting, model generation through photographs or modeling within Unreal and Unity.

The content of this training program includes a syllabus made up of the most up-to-date knowledge, which the professional will learn in an agile way thanks to the methodology implemented by TECH based on *re-learning*, which allows for quick understanding of the concepts. Thus, in a maximum of 6 months and completely online, students will obtain their degree, with the support of experts in the subject who will use numerous resources such as practical exercises, audiovisual material and interactive summaries, among others, which will make the process much more dynamic.

This **Postgraduate Diploma in Creation of Organic Landscapes and Environments Through Digital Sculpture** includes the most complete and up-to-date educational program on the market. The most important features include:

- Practical cases presented by experts in 3D modeling and digital sculpture.
- The graphic, schematic, and eminently 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.
- Special emphasis on innovative methodologies.
- Theoretical lessons, questions to the expert, debate forums on controversial topics, and individual reflection assignments.
- Access to content from any fixed or portable device with an Internet connection.

If you work in creative environments for video game development, this program will give you the tools to do so as a true professional"

"*With this program you will be able to handle the different techniques of organic modeling and fractal systems such as SpeedTree for the creation of elements of nature, as well as different terrains*"
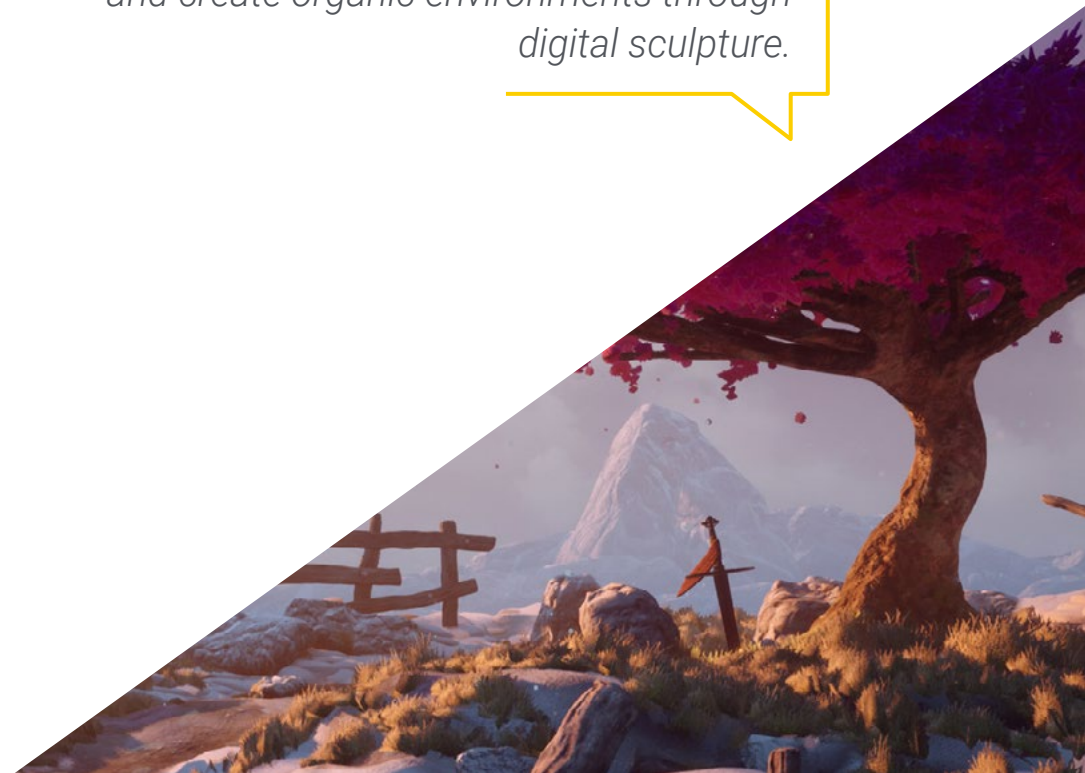
For those who need to work and study at the same time, the online education system is the most appropriate methodology. Start you journey with TECH.

Master the Blender software like an expert and create organic environments through digital sculpture.

The program's teaching staff includes professionals from sector who contribute their work experience to this training 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 training programmed to train 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 student will be assisted by an innovative interactive video system created by renowned and experienced experts.

02
Objectives

The main objective of this professional training is that the student is able to master the techniques, tools and processes involved in the creation of projects which include augmented reality, as well as the creation of organic environments and terrains through digital sculpture. Successfully complete the 3 study modules in a maximum of 6 months, obtain the necessary skills to perform well and stand out in the video game industry, as well as those other sectors which implement virtual reality.

If you want to stand out as a 3D art professional in the creative world of video games, this program is for you"

General Objectives

- Know the *workflow* of the industry of 3D animation, video games and 3D printing applied with the latest market trends
- Learn the management of the necessary techniques and programs to apply in the accurate modeling, texturing, lighting and rendering processes
- Meet the demands in the creation of terrains and organic environments for video games, cinema, 3d printing, infoarchitecture, augmented and virtual reality
- Achieve specialized *hard surface* and infoarchitecture finishes
- Know the current demands of the movie, video game and infoarchitecture industries in order to offer the best results

Creating increasingly realistic terrains and organic environments will be possible after studying this Postgraduate Diploma. Include digital sculpting in the creative process of your next videogames"

Specific Objectives

Module 1. Hard Surface Creation

- Use modeling by means of *edit poly* and *splines*
- Manage organic sculpting in an advanced way
- Create infoarchitecture and integrate them in Lumion
- Model scenographies using 3Ds Max and integrate them with *ZBrush*

Module 2. Blender

- Gain advanced knowledge in the use of Blender software
- Render in your Eevee and Cycles render engines
- Delve into work processes within CGI
- Transferring knowledge from *ZBrush* and 3ds Max to Blender
- Transfer creation processes from Blender to Maya and Cinema 4D

Module 3. Creation of Organic Terrains and Environments

- 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
- Deepen knowledge of the vegetation creation system and how to control it professionally in Unity and Unreal Engine
- Create scenes with immersive VR experiences

03
Course Management

The teaching staff at the head of this program has the necessary level of experience to guarantee an effective development in the student's learning process. Thus, they will transmit to the student all the key elements for the creation of organic terrains and environments by means of digital sculpture, so that they can integrate them into their work practice. Thus, this Postgraduate Diploma not only has an innovative and effective teaching methodology, but also a highly qualified faculty to provide the answers that the student needs about this complex and exciting discipline.

Experts in concept art and 3D modeling will accompany you in the process of your professionalization. Get trained by specialists in this exclusive TECH program. Enroll now"

Management

Mr. Sequeros Rodríguez, Salvador

- Freelance 2D/3D modeler and generalist
- Concept Art and 3D Models for Slicecore. Chicago
- Videomapping and modeling, Rodrigo Tamariz. Valladolid
- Professor of Higher Level Training Cycle in 3D Animation. Higher Education School of Image and Sound ESISV. Valladolid
- Professor of Higher Level Training Cycle GFGS in 3D Animation. European Institute of Design IED Madrid
- 3D modeling for the falleros Vicente Martinez and Loren Fandos. Castellón
- Master's Degree in Computer Graphics, Games and Virtual Reality. URJC University. Madrid
- Degree in Fine Arts at the University of Salamanca (specializing in Design and Sculpture).

04

Structure and Content

Within 3 modules well-organized into specialized topics, we cover the tools and knowledge about the creation of *hard surface* in the multiplatform software *Blender*. Knowledge that the professional will be able to acquire in an effective way, thanks to a totally online study methodology, based on *re-learning*; adjusted to the student's own needs and routines to graduate with this Postgraduate Diploma in Creation of Landscapes and Organic Environments through Digital Sculpture in a maximum of 6 months.
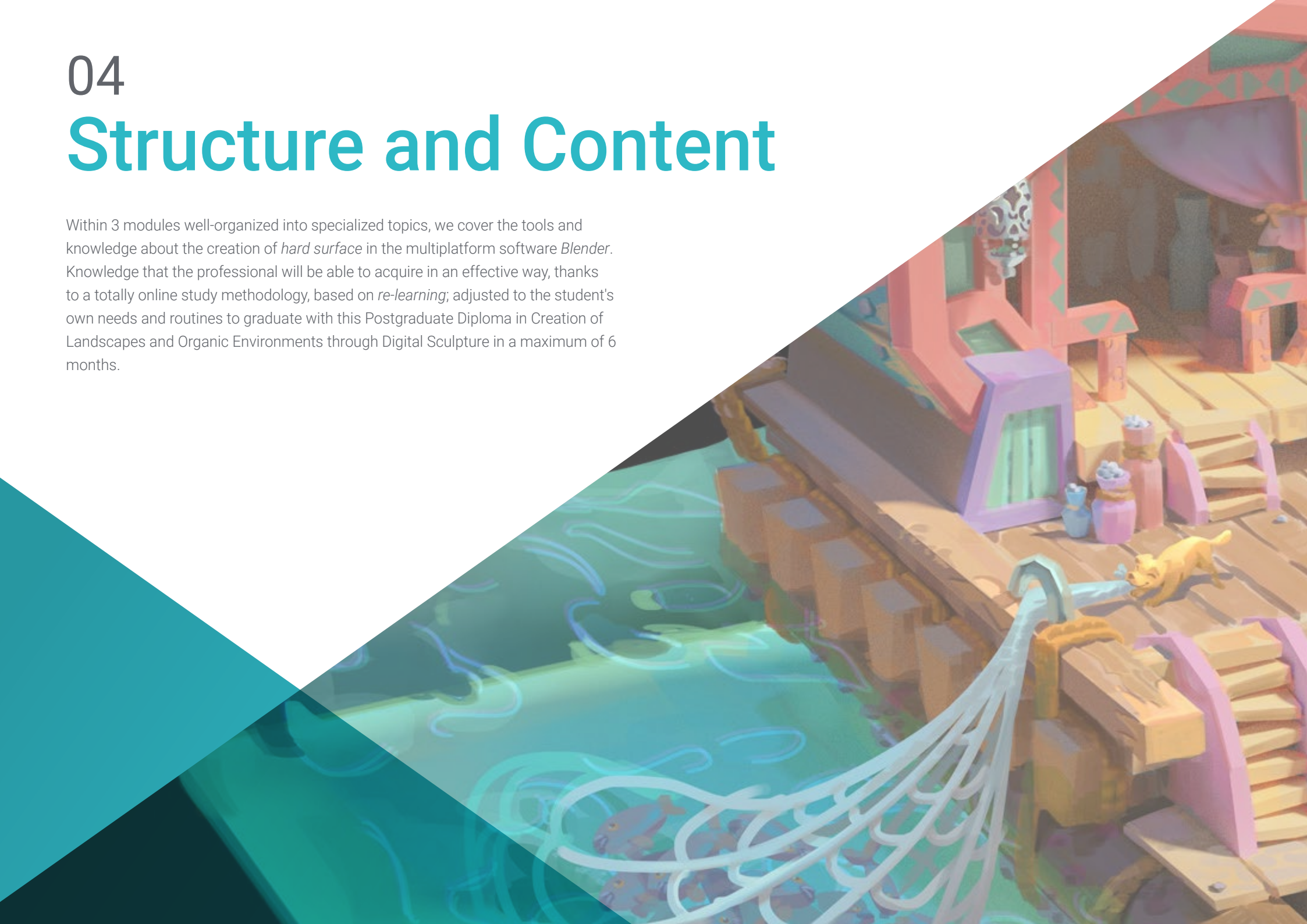
Master the various sculptural techniques to establish yourself as a creative expert of organic environments"

Module 1. *Hard Surface* Creation

1.1. Sculpture Techniques and Applications
- 1.1.1. *Edit Poly*
- 1.1.2. *Splines*
- 1.1.3. Organic Model

1.2. *Edit Poly* Monitoring
- 1.2.1. *Loops* and Extrusions
- 1.2.2. Containment Geometry for Smoothing
- 1.2.3. Modifiers and *Ribbon*

1.3. Mesh Optimizations
- 1.3.1. Quads, Tris and Ngons: When to use them?
- 1.3.2. Booleans
- 1.3.3. *Low Poly* vs. *High Poly*

1.4. *Splines*
- 1.4.1. Modifiers of *splines*
- 1.4.2. Working Plots and Vectors
- 1.4.3. *Splines* as Helpers in Scenes

1.5. Organic Structure
- 1.5.1. *Zbrush* Interface
- 1.5.2. Modeling Techniques in *ZBrush*
- 1.5.3. *Alphas* and Brushes

1.6. *Model Sheet*
- 1.6.1. Reference Systems
- 1.6.2. Configuration of Modeling Templates
- 1.6.3. Measurements

1.7. Modeling for Infoarchitecture
- 1.7.1. Façade Modeling
- 1.7.2. Follow-up of Plans
- 1.7.3. Interior Modeling

1.8. Scenography
- 1.8.1. Prop Creations
- 1.8.2. Furniture
- 1.8.3. Detailing in *Zbrush* Organic Modeling

1.9. Masks
- 1.9.1. Masking for Modeling and Painting
- 1.9.2. Geometry Masks and Modeling IDs
- 1.9.3. Mesh Occultations, *Polygroups* and Cuts

1.10. 3D Design and *Lettering*
- 1.10.1. Use of Shadow Box
- 1.10.2. Model Topology
- 1.10.3. *ZRemesher* Automatic Retopology

Module 2. Blender

2.1. Free Software
- 2.1.1. LTS Version and Community
- 2.1.2. Pros and Differences
- 2.1.3. Interface and Philosophy

2.2. Integration with 2D
- 2.2.1. Adaptation of the Program
- 2.2.2. *Crease Pencil*
- 2.2.3. 2D Combination in 3D

2.3. Modeling Techniques
- 2.3.1. Adaptation of the Program
- 2.3.2. Modeling Methodologies
- 2.3.3. *Geometry Nodes*

2.4. Texturing Techniques
- 2.4.1. *Nodes Shading*
- 2.4.2. Textures and Materials
- 2.4.3. Tips for Use

2.5. Lighting
- 2.5.1. Tips for Light Spaces
- 2.5.2. *Cycles*
- 2.5.3. Eevee

2.6. *Workflow* in CGI
- 2.6.1. Necessary Uses
- 2.6.2. Exportations and Importations
- 2.6.3. Final Art

Module 3. Creation of Organic Terrains and Environments

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 Re-learning, 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"

At TECH we use the Case Method

Our program offers a revolutionary method of skills and knowledge development. Our goal is to strengthen skills in a changing, competitive, and highly demanding environment.

"

At TECH, you will experience a way of learning that is shaking the foundations of traditional universities around the world"

We are the first online university to combine Harvard Business School case studies with a 100% online learning system based on repetition.

A learning method that is different and innovative

This intensive Video Game Design program at TECH Technological University prepares you to face all the challenges in this field, both nationally and internationally. We are committed to promoting your personal and professional growth, the best way to strive for success, that is why, at TECH Technological University, you will use Harvard *case studies*, with which we have a strategic agreement that allows us, to offer you material from the best university in the world.

"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.

The student will learn, through collaborative activities and real cases, how to solve complex situations in real business environments.

Re-learning Methodology

Our university is the first in the world to combine Harvard University *case studies* with a 100%-online learning system based on repetition, which combines different teaching elements in each lesson.

We enhance Harvard *case studies* with the best 100% online teaching method: Re-learning.

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 Re-learning.

Our university is the only university 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.

01 learning from evidence

02 relearning from evidence

03 testing

04 learning from an expert

05 neurocognitive context dependent learning

06 Von-Restorff effect

07 case based learning through storytelling

08 competencies testing (retesting)

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.

Re-learning 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 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.

30%

10%

8%

Case Studies

They will complete a selection of the best case studies in the field used at Harvard. Cases that are presented, analyzed, and supervised by the best senior management 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 multimedia content presentation training Exclusive system 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 your goals.

20%

25%

4%

3%

Certificate

The Postgraduate Diploma in Creation of Organic Landscapes and Environments Through Digital Sculpture guarantees, in addition to the most rigorous and up-to-date training, access to a Postgraduate Diploma issued by TECH Technological University.

Successfully complete this training program and receive your university certificate without travel or laborious paperwork"
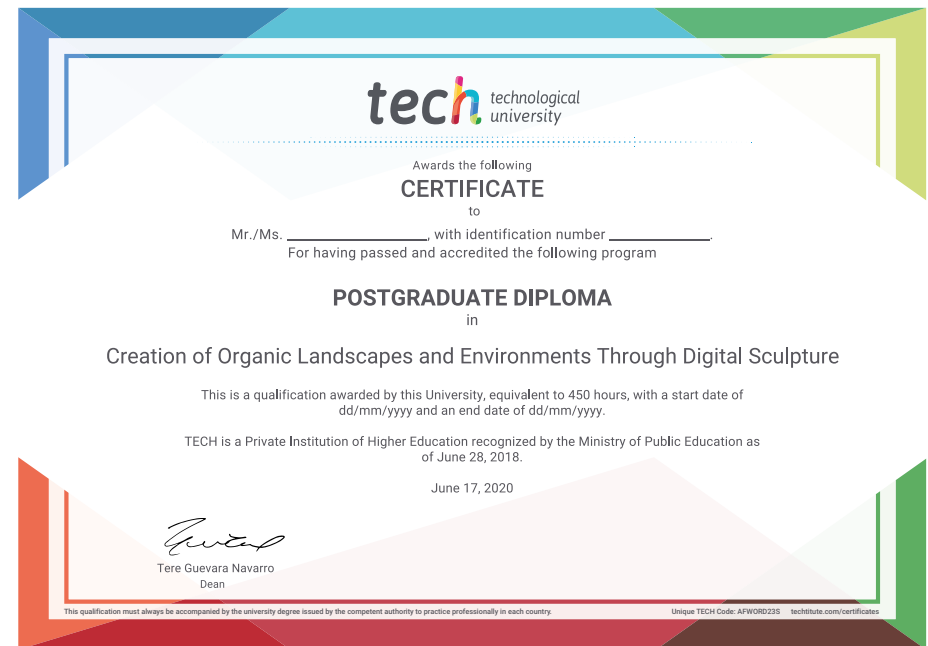
This **Postgraduate Diploma in Creation of Organic Landscapes and Environments Through Digital Sculpture** includes the most complete and up-to-date program on the market.

After passing the assessments, the student will receive their corresponding **Postgraduate Diploma** issued by **TECH Technological University** via tracked delivery.

The certificate issued by **TECH Technological University** will reflect the qualification obtained in the Postgraduate Diploma, and meets the requirements commonly demanded by labor exchanges, competitive examinations, and professional career evaluation committees.

Title: **Postgraduate Diploma in Creation of Organic Landscapes and Environments Through Digital Sculpture**

Official Nº of Hours: **450 hours.**

tech technological university

Awards the following
CERTIFICATE
to

Mr./Ms. _____, with identification number _____.
For having passed and accredited the following program

POSTGRADUATE DIPLOMA
in

Creation of Organic Landscapes and Environments Through Digital Sculpture

This is a qualification awarded by this University, equivalent to 450 hours, with a start date of dd/mm/yyyy and an end date of dd/mm/yyyy.

TECH is a Private Institution of Higher Education recognized by the Ministry of Public Education as of June 28, 2018.

June 17, 2020

Tere Guevara Navarro
Dean

This qualification must always be accompanied by the university degree issued by the competent authority to practice professionally in each country.   Unique TECH Code: AFWORD23S   techtitute.com/certificates

*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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