

Postgraduate Diploma

Creation of Organic Landscapes and Environments through Digital Sculpture



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.techtute.com/in/information-technology/postgraduate-diploma/postgraduate-diploma-creation-organic-landscapes-environments-digital-sculpture

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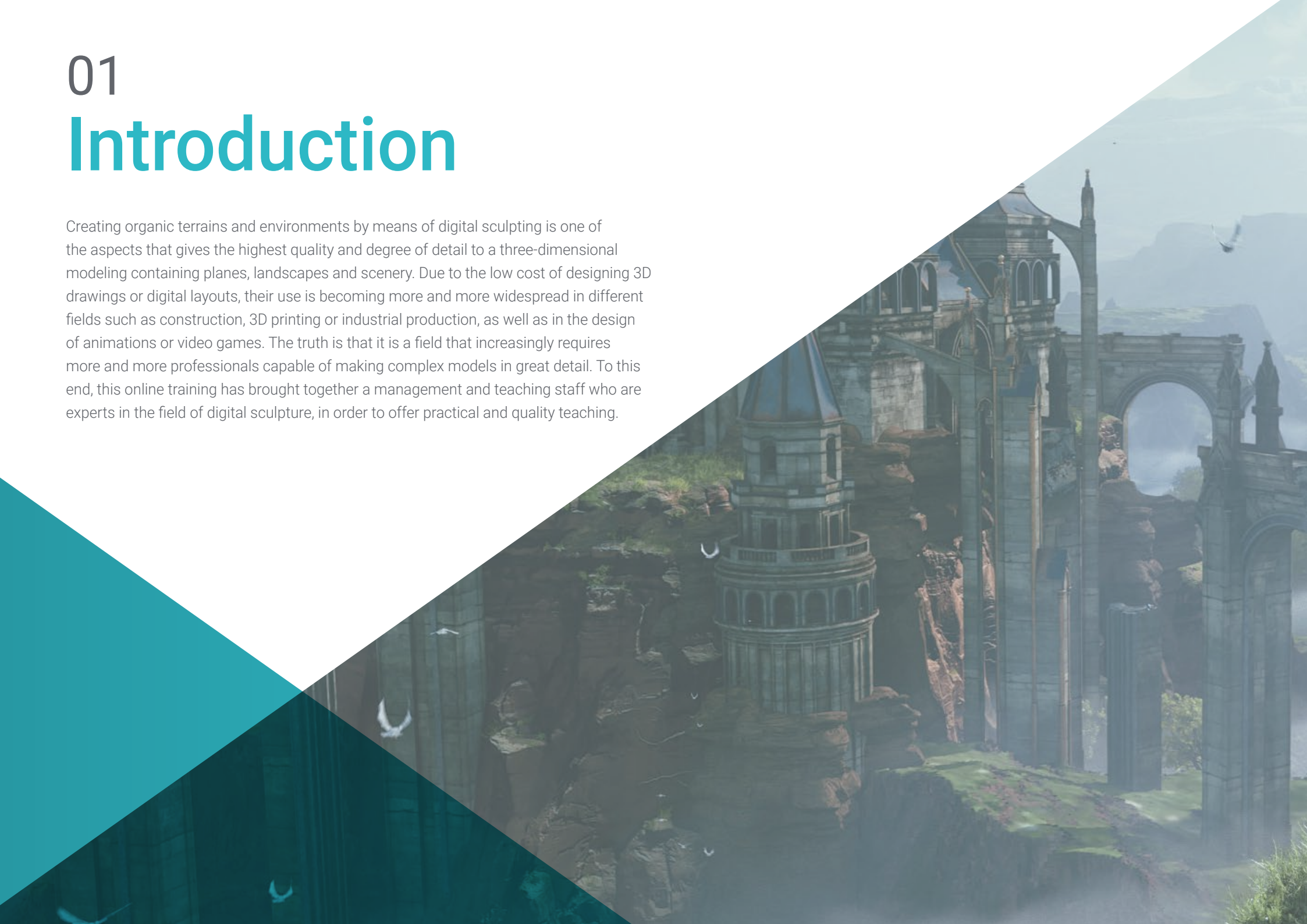
Certificate

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01

Introduction

Creating organic terrains and environments by means of digital sculpting is one of the aspects that gives the highest quality and degree of detail to a three-dimensional modeling containing planes, landscapes and scenery. Due to the low cost of designing 3D drawings or digital layouts, their use is becoming more and more widespread in different fields such as construction, 3D printing or industrial production, as well as in the design of animations or video games. The truth is that it is a field that increasingly requires more and more professionals capable of making complex models in great detail. To this end, this online training has brought together a management and teaching staff who are experts in the field of digital sculpture, in order to offer practical and quality teaching.



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It meets the professional demand for the creation of organic terrains and environments for multipurpose uses such as video games, cinemas, 3D printing, infoarchitecture and augmented reality”

The study plan has been designed so that, at the end of the course, the student will be able to recreate terrains and organic environments in their three-dimensional modeling, thanks to a path that begins with an in-depth study of the creation of rigid surfaces and Hardsurface, using Edit Poly and Splines, creating infoarchitectures and integrating them using Lumion and modeling scenographies using 3DS Max.

The educational program then delves into the creation of organic terrains and environments, learning about the different techniques of organic modeling and fractal systems for the generation of elements of nature, as well as terrains, and the implementation of the models themselves and 3D scans. It also delves into the vegetation creation system and how to control it professionally in Unity and Unreal Engine, and how to create scenes with immersive experiences in VR.

Finally, a last block will dwell on software Blender and how to use it in an advanced way, as well as rendering the Eevee and Cycles engines, transferring knowledge from ZBrush and 3DS Max to Blender and, in turn, transferring the creation processes from Blender to Maya and Cinema 4D.

This Postgraduate Diploma in the Creation of Landscapes and Organic Environments through Digital Sculpture is offered in a completely online mode, in order to facilitate the student's conciliation with other personal and professional projects. In addition, it is a direct degree, which means that the student does not have to do a final work to obtain accreditation.

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

- ◆ The development of case studies 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 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



In a practical, simple and convenient way: obtain the Postgraduate Diploma in the Creation of Organic Landscapes and Environments through Digital Sculpture with this online training with direct accreditation"

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With this Postgraduate Diploma you will learn how to transfer your knowledge in ZBrush and 3DS Max to Blender software"

The program's teaching staff includes professionals from the 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.

Learn how to create infoarchitectures and integrate them using Lumion and model scenographies using 3DS Max.

Specialize and recycle your knowledge without sacrificing other personal and professional projects.



02 Objectives

The focus of this training is for the student to learn the techniques and programs necessary to apply in the processes of modeling, texturing, lighting and rendering accurately in the creation of terrains and organic environments for video games, film, 3D printing, infoarchitecture and augmented and virtual reality. It also develops transversal and useful skills for professional performance, such as knowledge of the industry's Workflow applied to the latest market trends.



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Learn how to create organic terrains and environments through digital sculpture and learn about the industry's workflow applied to the latest market trends"



General Objectives

- ◆ Know the workflow of the 3D animation, videogames and 3D printing industry applied to the latest market trends
- ◆ Learn how to use the techniques and programs necessary to apply in the modeling, texturing, lighting and rendering processes in a precise way
- ◆ Meet the demands in the creation of terrains and organic environments for video games, cinema, 3D printing, infoarchitecture, augmented and virtual reality
- ◆ Specialized hard surface finishing and infoarchitecture
- ◆ Know the current demands of the film, video game and infoarchitecture industry to deliver great results



This Postgraduate Diploma will teach you how to use Blender software in an advanced way"





Specific Objectives

Module 1. Creation of Hard Surfaces and Rigid Surfaces

- ◆ Use modeling by means of edit poly and splines
- ◆ Advanced handling of organic sculpture
- ◆ Creating infoarchitectures and integrating them into Lumion
- ◆ Modeling scenographies using 3DS Max and integrating them with ZBrush

Module 2. Creation of Organic Soils and Environments

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

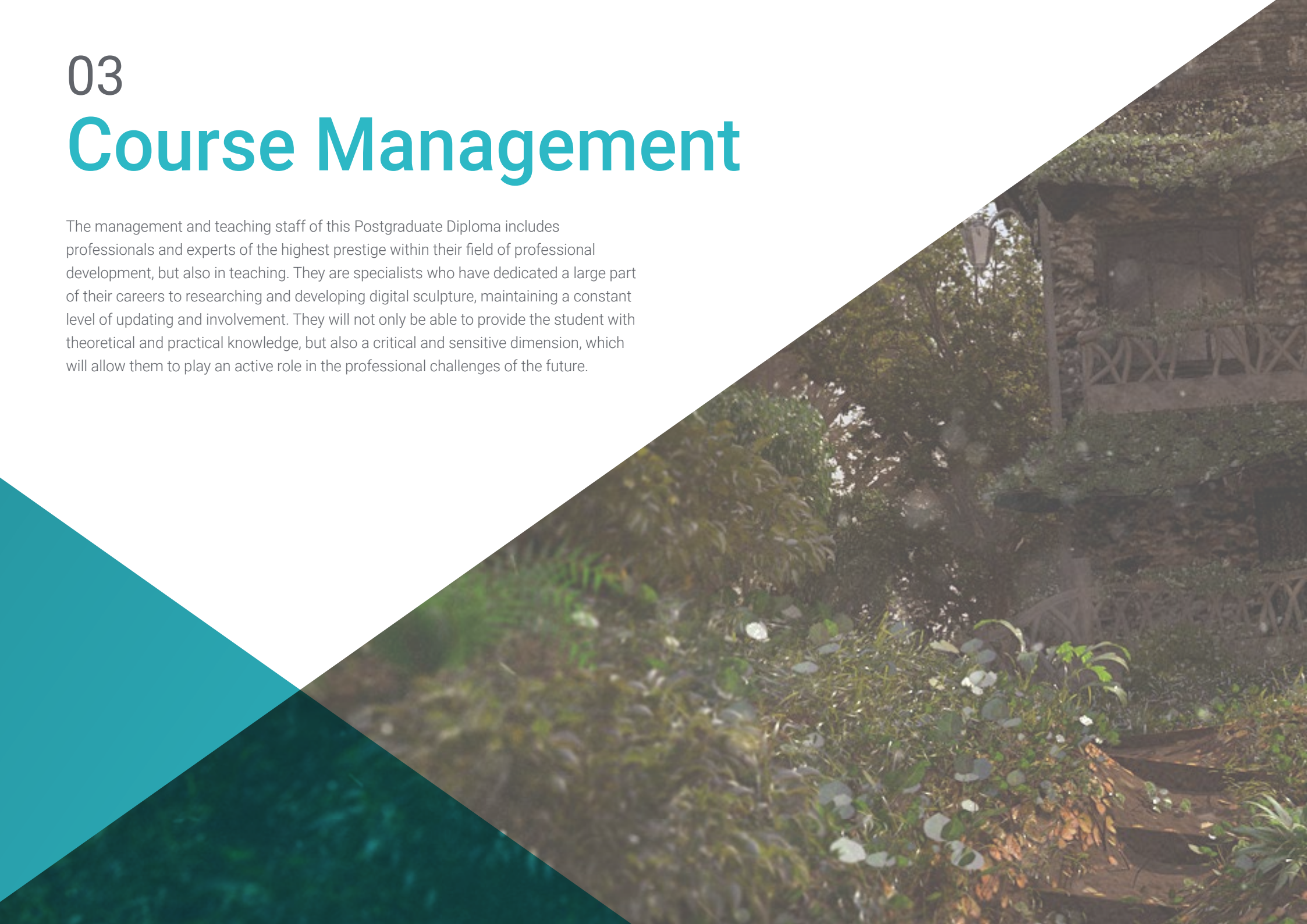
Module 3. Blender

- ◆ Advanced Blender software development
- ◆ Render in your Eevee and Cycles render engines
- ◆ Delve into work processes within CGI
- ◆ Transferring ZBrush and 3DS Max knowledge to Blender
- ◆ Transferring creation processes from Blender to Maya and Cinema 4D

03

Course Management

The management and teaching staff of this Postgraduate Diploma includes professionals and experts of the highest prestige within their field of professional development, but also in teaching. They are specialists who have dedicated a large part of their careers to researching and developing digital sculpture, maintaining a constant level of updating and involvement. They will not only be able to provide the student with theoretical and practical knowledge, but also a critical and sensitive dimension, which will allow them to play an active role in the professional challenges of the future.



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A group of experts and professionals in digital sculpture make up the faculty of this Postgraduate Diploma"

Management



Mr. Sequeros Rodríguez, Salvador

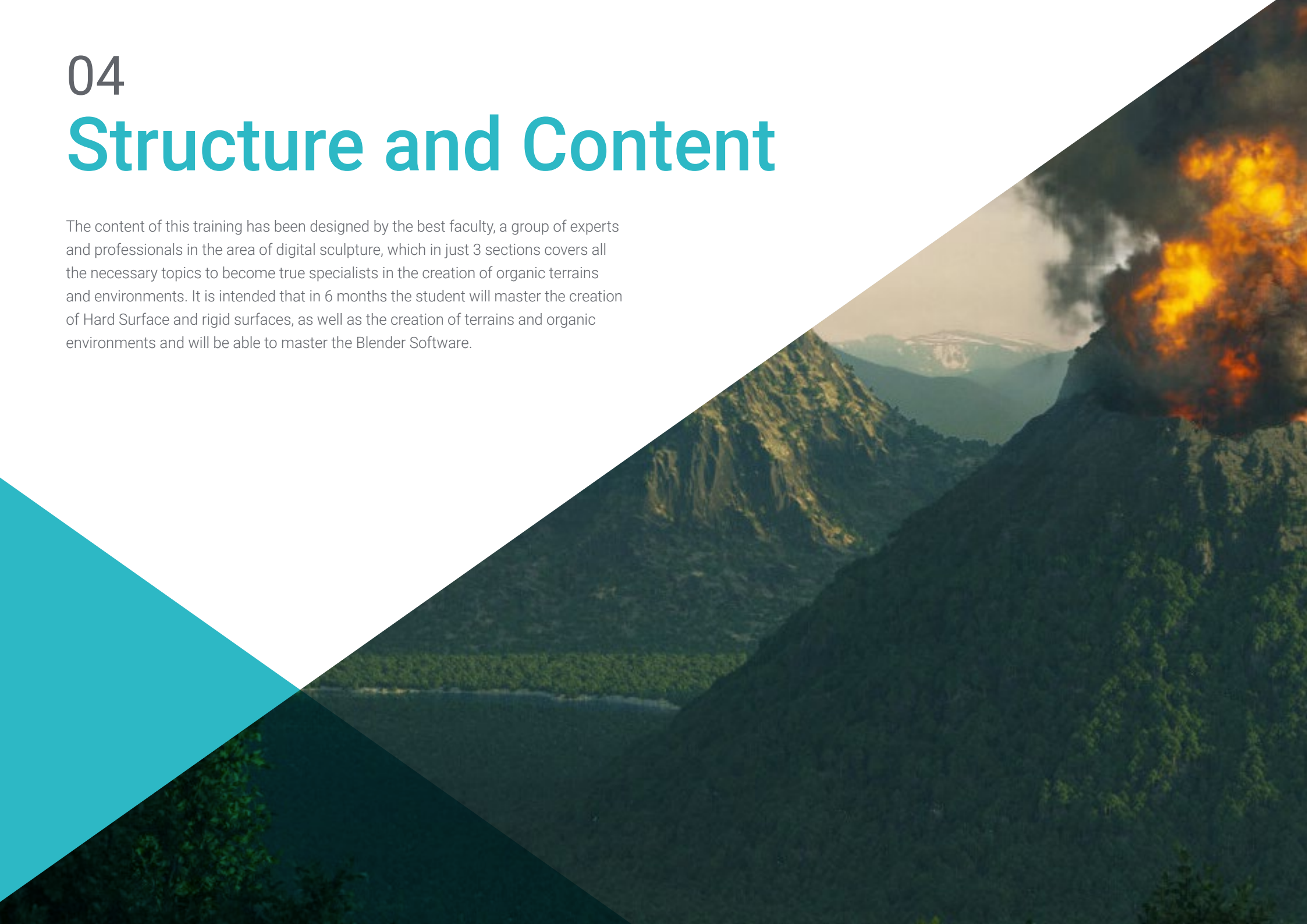
- Freelance 2D/3D modeler and generalist
- Concept art and 3D modeling for Slicecore (Chicago)
- Videomapping and modeling Rodrigo Tamariz (Valladolid)
- Professor of Higher-Level Training Cycle 3D Animation Superior School of Image and Sound ESISV (Valladolid)
- Professor of Higher-Level Training Cycle GFSG 3D Animation European Institute 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.
- Bachelor of Fine Arts at the University of Salamanca (specializing in Design and Sculpture)



04

Structure and Content

The content of this training has been designed by the best faculty, a group of experts and professionals in the area of digital sculpture, which in just 3 sections covers all the necessary topics to become true specialists in the creation of organic terrains and environments. It is intended that in 6 months the student will master the creation of Hard Surface and rigid surfaces, as well as the creation of terrains and organic environments and will be able to master the Blender Software.






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With this Postgraduate Diploma you will become, in only 6 months, an expert in the creation of organic terrains and environments"

Module 1. Creation of Hard Surfaces and Rigid Surfaces

- 1.1. Sculpting Techniques and Applications
 - 1.1.1. Edit Poly
 - 1.1.2. Splines
 - 1.1.3. Organic Modeling
- 1.2. Edit Poly Modeling
 - 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. Spline Modifiers
 - 1.4.2. Working Plots and Vectors
 - 1.4.3. Splines as Scene Assistants
- 1.5. Organic Sculpture
 - 1.5.1. ZBrush Interface
 - 1.5.2. ZBrush Modeling Techniques
 - 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. Facade Modeling
 - 1.7.2. Follow-up of Plans
 - 1.7.3. Interior Modeling



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- 1.8. Scenography
 - 1.8.1. Creation of Props
 - 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 Cuttings
 - 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. Creation of Organic Soils and Environments

- 2.1. Organic Modeling in Nature
 - 2.1.1. Brush Adaptation
 - 2.1.2. Creation of Rocks and Cliffs
 - 2.1.3. Integration with Substance Painter 3D
- 2.2. Terrain
 - 2.2.1. Terrain Displacement Maps
 - 2.2.2. Creation of Rocks and Cliffs
 - 2.2.3. Scanning Libraries
- 2.3. Vegetation
 - 2.3.1. SpeedTree
 - 2.3.2. Low Poly Vegetation
 - 2.3.3. Fractals
- 2.4. Unity Terrain
 - 2.4.1. Organic Terrain Modeling
 - 2.4.2. Ground Painting
 - 2.4.3. Creation of Vegetation

- 2.5. Unreal Terrain
 - 2.5.1. Heightmap
 - 2.5.2. Texturing
 - 2.5.3. Unreal's Foliage System
- 2.6. Physics and Realism
 - 2.6.1. Physical
 - 2.6.2. Wind
 - 2.6.3. Fluids
- 2.7. Virtual Walks
 - 2.7.1. Virtual Cameras
 - 2.7.2. Third Person
 - 2.7.3. First Person FPS
- 2.8. Cinematography
 - 2.8.1. Cinemachine
 - 2.8.2. Sequencer
 - 2.8.3. Recording and Executables
- 2.9. Visualization of Modeling in Virtual Reality
 - 2.9.1. Modeling and Texturing Tips
 - 2.9.2. Exploitation of Interaxial Space
 - 2.9.3. Project Preparation
- 2.10. VR Scene Creation
 - 2.10.1. Location of Cameras
 - 2.10.2. Land and Infoarchitecture
 - 2.10.3. Platforms of Use

Module 3. Blender

- 3.1. Free Software
 - 3.1.1. LTS Version and Community
 - 3.1.2. Pros and Differences
 - 3.1.3. Interface and Philosophy
- 3.2. 2D Integration
 - 3.2.1. Program Adaptation
 - 3.2.2. Crease Pencil
 - 3.2.3. Combination 2D in 3D
- 3.3. Modeling Techniques
 - 3.3.1. Program Adaptation
 - 3.3.2. Modeling Methodologies
 - 3.3.3. Geometry Nodes
- 3.4. Texturing Techniques
 - 3.4.1. Nodes Shading
 - 3.4.2. Textures and Materials
 - 3.4.3. Usage Tips
- 3.5. Lighting
 - 3.5.1. Tips for Light Spaces
 - 3.5.2. Cycles
 - 3.5.3. Eevee
- 3.6. Workflow in CGI
 - 3.6.1. Necessary Uses
 - 3.6.2. Exports and Imports
 - 3.6.3. Final Art

- 3.7. 3DS Max Adaptations to Blender
 - 3.7.1. Modeling
 - 3.7.2. Texturing and Shading
 - 3.7.3. Lighting
- 3.8. Knowledge of ZBrush to Blender
 - 3.8.1. 3D Sculpting
 - 3.8.2. Brushes and Advanced Techniques
 - 3.8.3. Organic Work
- 3.9. From Blender to Maya
 - 3.9.1. Important Stages
 - 3.9.2. Adjustments and Integrations
 - 3.9.3. Exploitation of Functionalities
- 3.10. From Blender to Cinema 4D
 - 3.10.1. Tips for 3D Design
 - 3.10.2. Use of Modeling Towards Video Mapping
 - 3.10.3. Modeling with Particles and Effects

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Be a complete 3D modeling professional and a specialist in creating organic terrains and environments”

05 Methodology

This training program provides you with 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"

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.

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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.



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

A learning method that is different and innovative

This intensive program in Computer Science at TECH Technological University prepares you to face all the challenges in this area, 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 Computer 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

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: Relearning.

In 2019 we obtained the best learning results of all Spanish-language 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 Spanish-speaking university qualified 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 Spanish 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.



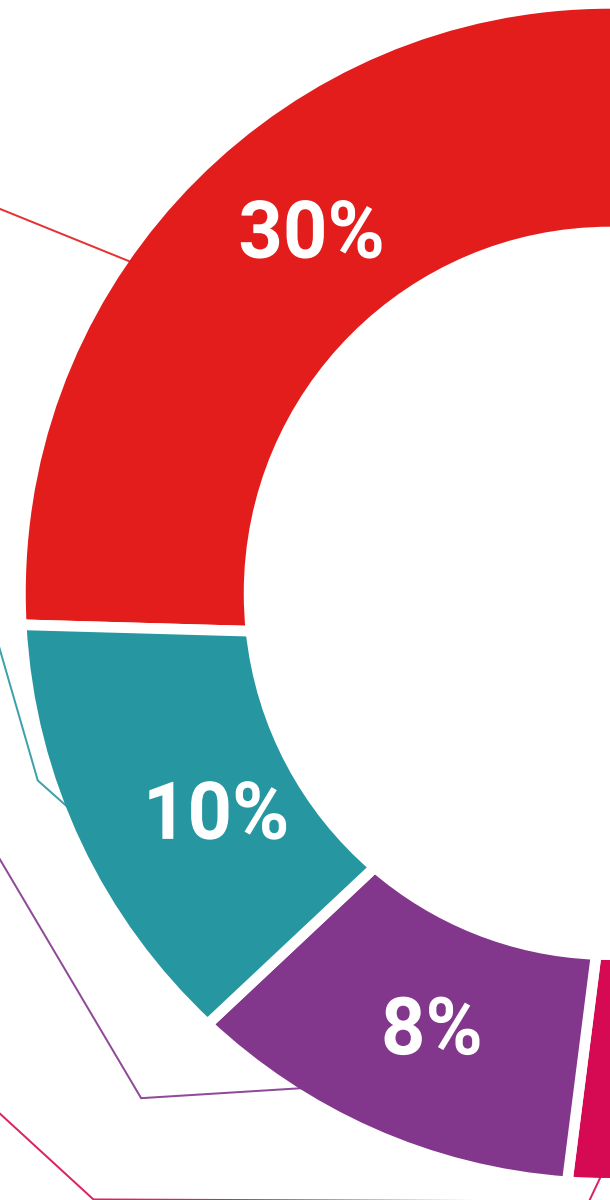
Practising Skills and Abilities

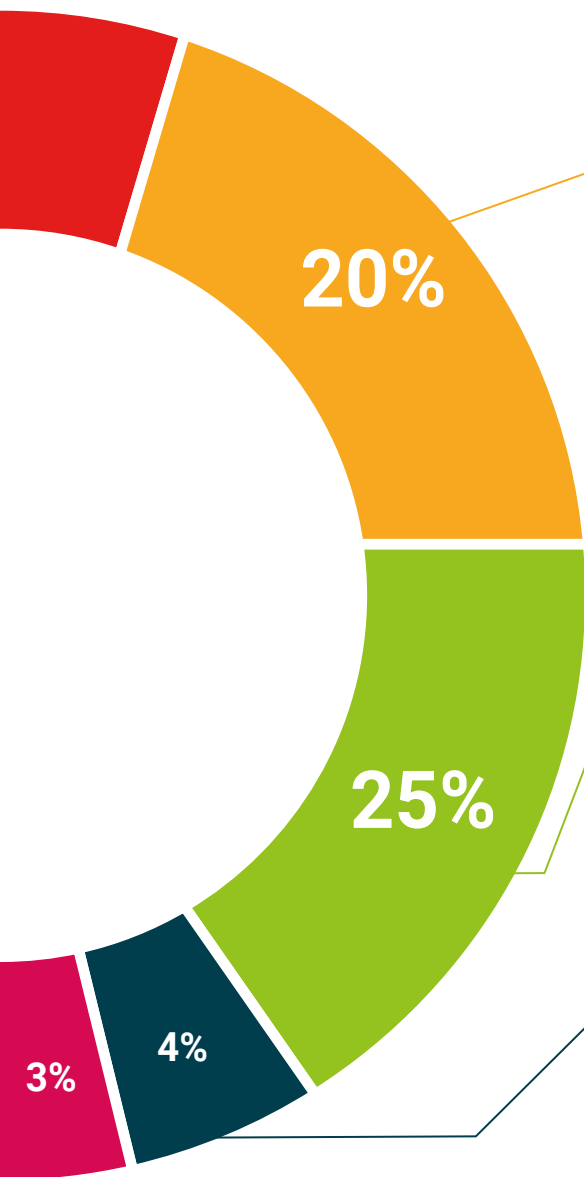
They will carry out activities to develop specific competencies and skills in each thematic area. Exercises and activities to acquire and develop the skills and abilities that a specialist needs to develop in the context of the globalization we live in.



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.





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 Latin America.



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 & Re-testing

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.



06 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 qualification issued by TECH Technological University.



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*Successfully complete this training program
and receive your diploma without travel or
laborious paperwork”*

The **Postgraduate Diploma in Creation of Organic Landscapes and Environments through Digital Sculpture** 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 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 from career evaluation committees.

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

Official N° of Hours: **450 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.

future
health confidence people
education information tutors
guarantee accreditation teaching
institutions technology learning
community commitment
personalized service innovation
knowledge present
development languages
classroom



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