

Postgraduate Diploma Blender Modeling



Postgraduate Diploma Blender Modeling

- » Modality: online
- » Duration: 6 months
- » Certificate: TECH Global University
- » Accreditation: 18 ECTS
- » Schedule: at your own pace
- » Exams: online

Website: www.techtitute.com/us/design/postgraduate-diplma/blender-modeling

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01

Introduction

Currently, Blender is one of the most used tools by designers to edit objects in a precise way or sculpt in 3D. Therefore, its correct handling is indispensable in the world of design and in this program professionals will unveil the secrets and tricks that have been perfected over the years to use them. In this way, and in a 100% online modality, students will be able to learn the interface of each one and manage them to create a character from scratch to the Render, solving any problem that may arise during the sculpting process.





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*Professionals of the highest level
will teach you their tricks and
secrets to be an expert in Blender”*

Blender is par excellence one of the most used programs by 3D modelers who have worked on large projects in the world of cinema and video games. They help sculpt shapes in digital clay, create people from other universes and present a realistic and fluid finish when rendered. In addition, its use is more intuitive than other software, which is why it has been used to create characters such as Baymax from Disney Pixar's Big Hero 6, or to dress Pikachu in the Deadpool costume.

For all these reasons, it is essential for designers who wish to start modeling to have a thorough knowledge of these tools. TECH presents this Postgraduate Diploma, in which students will be able to adapt their learning pace according to their daily activities thanks to the 100% online modality. This will allow them to access the contents from anywhere in the world and at the time that best suits them.

Therefore, you will learn in detail the Blender tool, texturing with Substance Painter and the process of exporting to Unreal. In addition, you will learn how to handle yourself like a professional through its interface. In this way, you will make an exhaustive review of the different methods for modeling characters or creatures, the optimization of their modeling, the improvement of symmetry, the division into groups and, in general, everything you need to make an organic 3D modeling.

All this content will be accompanied by didactic videos, which will explain the most appropriate ways in which professionals work, in addition to presenting the tricks to sculpt a head, create hair and hair, clothing, among others. In short, a complete and up-to-date Postgraduate Diploma, ideal for entering this new sector.

This **Postgraduate Diploma in Blender Modeling** contains the most complete and up-to-date program on the market. The most important features include:

- ◆ The development of case studies presented by experts in 3D Modeling with 3D Studio Max
- ◆ The graphic, schematic, and practical contents with which they are created, provide 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



*Thanks to this program
you will be able to progress
in the world of artistic
design and modeling"*

“*TECH has designed and perfected the Relearning methodology, to allow you to learn in a natural and progressive way, strengthening your skills to face new challenges*”

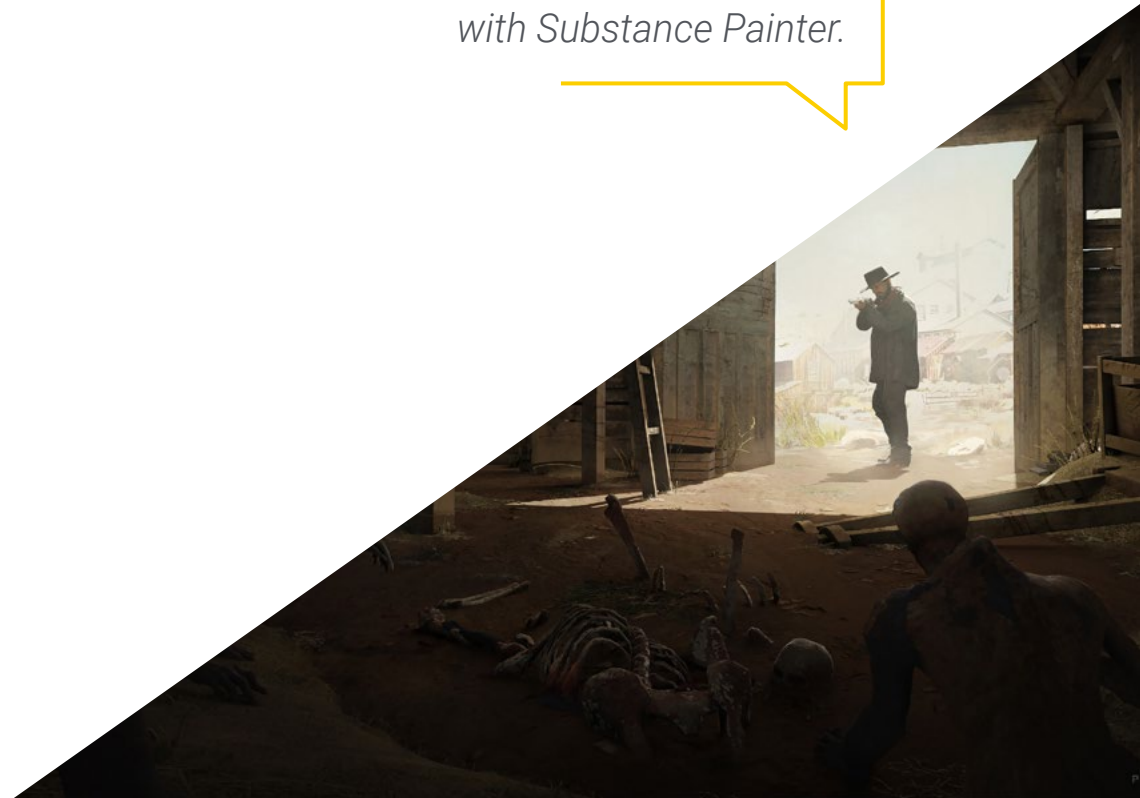
The program's teaching staff includes professionals from the industry who contribute their work experience to this program, as well as renowned specialists from leading societies and prestigious universities.

Its multimedia content, developed with the latest educational technology, will allow professionals to learn in a contextual and situated learning environment, i.e., a simulated environment that will provide immersive education programmed to prepare in real situations.

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

Thanks to the 100% online modality, you will be able to adapt your learning pace without leaving your professional and personal activities.

Enroll now in this program and you will have access to the most current and innovative content on texturing with Substance Painter.



02 Objectives

A perfect knowledge of the most advanced programs in the world of 3D modeling is indispensable for any professional. Therefore, this Postgraduate Diploma offers students all the knowledge they need to handle the Blender interface with a high level of expertise. Upon graduation, they will be able to carry out important projects for the most respected companies in the sector or, on the contrary, provide their services as independent modelers, representing an important leap for their career.



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*It's time to reach your goals.
Become an expert in Blender
and make characters for a
movie or animated short film"*



General Objectives

- ◆ Know in depth all the steps to create a professional 3D modeling
- ◆ Know and understand in detail how textures work and how they influence modeling
- ◆ Master several programs focused on modeling, texturing and real time used today in the professional world
- ◆ Apply the knowledge acquired in solving modeling problems
- ◆ Learn how to organize and control the time spent on a complete 3D modeling, learning to value their work in the face of possible jobs
- ◆ Know the latest updates in the world of modeling and video games, learning about the most updated and used tools of each program
- ◆ Expertly use the knowledge acquired to create your own projects and intelligently add them to your portfolio
- ◆ Develop the resources of each program to achieve the best effect for your modeling
- ◆ Be professionally qualified to organize adequate working time for a job
- ◆ Solve complex problems and make responsible decisions





Specific Objectives

Module 1. 3D Modeling with Blender

- ◆ Know in detail the Blender tool, the most used by professionals.
- ◆ Learn its interface and get to grips with it for a more professional result in less time
- ◆ Compare each tool with its counterpart in polygonal mode and learn about their benefits
- ◆ Know the tools you will use throughout the 3D modeling process and their optimization
- ◆ Find errors in 3D modeling and know how to solve them in the most intelligent way.

Module 2. Substance Painter Texturing

- ◆ Know in depth the Substance Painter program, the most widely used for texturing in the world of video games today
- ◆ Understand the process of baking from a high resolution model to a low resolution model.
- ◆ Know and understand the different layers of a material and how they affect it
- ◆ Create materials from scratch and modify existing materials to achieve a fully customized material
- ◆ Know how to work with mapping coordinates and masks to correctly apply textures to the model
- ◆ Learn about brushes, how to use them and how to create customized brushes
- ◆ Learn how to use the resources found in the program or externally to improve our textures
- ◆ Know different methods to create or modify textures

Module 3. Exports to Unreal

- ◆ Handle the real-time Unreal Engine in such a way that it performs perfectly when working with a 3D model and its textures
- ◆ Understand the properties of Unreal materials
- ◆ Know how to work with and understand Unreal material nodes, giving effects to textures to achieve unique materials
- ◆ Correctly light an Unreal scene in a realistic way according to the desired ambience
- ◆ Configure Unreal Lightmaps, achieving better resolution and optimizing engine performance
- ◆ Perform basic post-processing for rendering with good visual effects



With TECH you will be able to achieve your goals, be independent and advance your career towards success in the world of 3D modeling"

03

Course Management

The Postgraduate Diploma in Blender Modeling has a teaching staff of great reference within the industry. They have dedicated part of their career to the tips and tricks that they will present throughout the program. Likewise, they will be available to solve any doubt that the student may have when doing the practical exercises or reviewing the syllabus. In addition, the entire syllabus has been developed based on their knowledge and recommendations, condensing the most relevant and requested aspects of the area.





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You will learn from the hand of the best designers and modelers in the industry, discovering their secrets to do an excellent job"

Management



Dr. Vidal Peig, Teresa

- ◆ Specialist in Arts and Technology (digital art, 2D, 3D, VR and AR)
- ◆ Designer and creator of 2D character sketches for mobile video games
- ◆ Designer at Sara Lee, Motos Bordy, Hebo and Full Gass
- ◆ Teacher and director of Professional Master's Degree in Video Game Programming
- ◆ Teacher at the University of Girona
- ◆ PhD in Architecture from the Polytechnic University of Catalonia
- ◆ Bachelor of Fine Arts from the University of Barcelona

Professors

Mr. Alcalde Perelló, Dimas

- ◆ Specialist in artistic creation for video games and applied games
- ◆ Lead artist at BluetechWorlds
- ◆ Teacher in the Artistic creation for videogames and applied games degree, ENTI UB
- ◆ Graduate in Artistic creation for videogames and applied games, Universitat de Barcelona
- ◆ Professional Master's Degree in Teacher Training for Compulsory Secondary Education and Baccalaureate, Vocational Training and Language Teaching by the University of La Rioja UNIR
- ◆ Technician in 3D Animation, Games and Interactive Environments by the Center for Photographic Studies

Mr. Llorens Aguilar, Víctor

- ◆ Postgraduate Diploma in 3D Modeling
- ◆ Teacher in courses related to 3D Modeling
- ◆ Scratch teacher in private schools
- ◆ Degree in 3D Animations, Games and Interactive Environments



04

Structure and Content

This Postgraduate Diploma in Blender Modeling contains a complete and current program, in addition, its structure encompasses all the most relevant aspects of the sector. Students will get to know, learn and become familiar with the interface of this software and will be able to implement their knowledge to create realistic characters or hard surfaces. All this with the corresponding audiovisual support, practical exercises and complementary guides.





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This complete program will help you learn everything you need to do organic or inorganic modeling in a simple way”

Module 1. 3D Modeling with Blender

- 1.1. Interface
 - 1.1.1. Initial Installation and Configuration
 - 1.1.2. Pull-Down Menus and Interface Modes
 - 1.1.3. Navigation in the 3D Environment
- 1.2. Object Creation and Selection
 - 1.2.2. Modifying Basic Topology
 - 1.2.3. Modifying Basic Topology
- 1.3. Edition
 - 1.3.1. Add New Geometry
 - 1.3.2. Modifying Geometries
 - 1.3.3. Modifiers and Mirror
- 1.4. Geometry
 - 1.4.1. Smooth Modifier
 - 1.4.1. Joining and Separating Meshes
 - 1.4.2. Untriangularize
- 1.5. Edit Mode
 - 1.5.1. Basic Modeling Units
 - 1.5.2. Loops
 - 1.5.3. Tris and Ngones
 - 1.5.4. Subdivision - Tool and Modifier
 - 1.5.5. Visibility - Hide and Reveal Objects
 - 1.5.6. Snap
 - 1.5.7. Smooth or Flat Preview Modes
- 1.6. Retopology
 - 1.6.1. Conforming One Mesh on Top of Another
 - 1.6.2. Creating Objects Using the 3D Cursor
- 1.7. Organic Model
 - 1.7.1. Shape and Topology
 - 1.7.2. Use of Curves
 - 1.7.3. Surface and Nurbs





- 1.8. Sculpting
 - 1.8.1. Brushes and Commands
 - 1.8.2. Use of Remesher
- 1.9. Selection
 - 1.9.1. Meshes Selection
 - 1.9.2. Modification of Selections
 - 1.9.3. Selecting by Vertices, Edges or Faces
- 1.10. Vertex Paint
 - 1.10.1. Brush Options
 - 1.10.3. Creating IDMaps

Module 2. Substance Painter Texturing

- 2.1. Substance Painter
 - 2.1.1. Create New Project and Reimport Models
 - 2.1.2. Basic Controls and Interface 2D and 3D Views
 - 2.1.3. Baking
- 2.2. Baking Layers
 - 2.2.1. World Space Normal
 - 2.2.2. Ambient Occlusion
 - 2.2.3. Curvature
 - 2.2.4. Position
 - 2.2.5. ID, Normal, Thickness
- 2.3. Layers
 - 2.3.1. Base Color
 - 2.3.2. Roughness
 - 2.3.3. Metallic
 - 2.3.4. Material
- 2.4. Masks and Generators
 - 2.4.1. Layers and UVs
 - 2.4.2. Masks
 - 2.4.3. Procedural Generators

- 2.5. Base Material
 - 2.5.1. Types of Material
 - 2.5.2. Customized Generators
 - 2.5.3. Creation of a Base Material from Scratch
- 2.6. Brushes
 - 2.6.1. Predefined Parameters and Brushes
 - 2.6.2. Alphas, Lazy Mouse and Symmetry
 - 2.6.3. Create Custom Brushes and Save Them
- 2.7. Particles
 - 2.7.1. Particle Brushes
 - 2.7.2. Properties of Particles
 - 2.7.3. Particles Using Masks
- 2.8. Projections
 - 2.8.1. Preparing Textures
 - 2.8.2. Stencil
 - 2.8.3. Cloning
- 2.9. Substance Share/Source
 - 2.9.1. Substance Share
 - 2.9.2. Substance Source
 - 2.9.3. Textures.com
- 2.10. Terminology.
 - 2.10.1. Normal Map
 - 2.10.2. Acolchado o Sangrado
 - 2.10.3. Mipmapping

Module 3. Exports to Unreal

- 3.1. Unreal Engine
 - 3.1.1. Game Exporter
 - 3.1.2. Create New Project and Controls
 - 3.1.3. Importing Models into Unreal
- 3.2. Basic Properties of Materials
 - 3.2.1. Create Materials and Nodes
 - 3.2.2. Constant and Its Values
 - 3.2.3. Texture Sample





- 3.3. Common Material Nodes
 - 3.3.1. Multiply
 - 3.3.2. Texture Coordinate
 - 3.3.3. Add
 - 3.3.4. Fresnel
 - 3.3.5. Panner
- 3.4. Materials and Bloom
 - 3.4.1. Linear Interpolate
 - 3.4.2. Power
 - 3.4.3. Clamp
- 3.5. Textures to Modify the Material
 - 3.5.1. Masks
 - 3.5.2. Transparent Textures
 - 3.5.3. Match Color
- 3.6. Basic Lighting
 - 3.6.1. Light Source
 - 3.6.2. Skylight
 - 3.6.3. Fog
- 3.7. Fill and Creative Lighting
 - 3.7.1. Point Light
 - 3.7.2. Spotlight and Rectlight
 - 3.7.3. Objects as Light Sources
- 3.8. Night Lighting
 - 3.8.1. Light Source Properties
 - 3.8.2. Fog Properties
 - 3.8.3. Skylight Properties
- 3.9. Lightmaps
 - 3.9.1. Viewer Modes. Lightmap Density
 - 3.9.2. Improve Lightmaps Resolution
 - 3.9.3. Lightmass Importance Volume
- 3.10. Rendering
 - 3.10.1. Cameras and Their Parameters
 - 3.10.2. Basic Post-Processing
 - 3.10.3. High Resolution Screenshot

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.



A close-up photograph of a desk with a laptop, a blue pen, and a silver marker. The image is partially obscured by a teal and white geometric overlay.

“

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.



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 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.



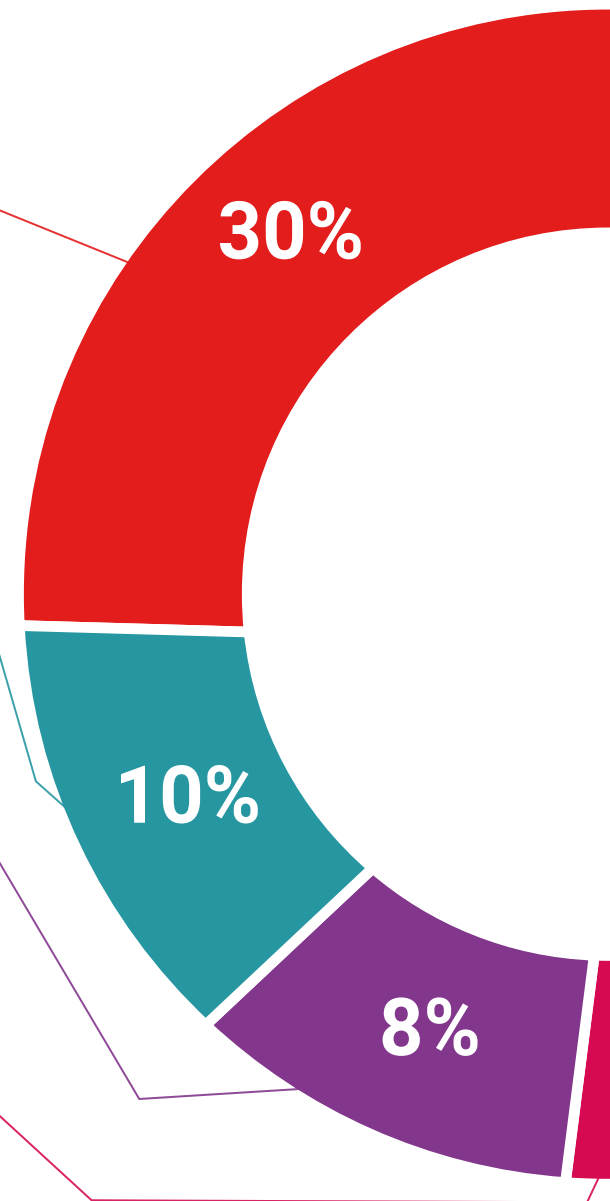
Practising Skills and Abilities

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

This Postgraduate Diploma in Blender Modeling guarantees, in addition to the most rigorous and up to date education, access to a Postgraduate Diploma 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 a **Postgraduate Diploma in Blender Modeling** endorsed by TECH Global University, the largest digital university in the world.

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 educational framework and harmonize the higher education systems of the member countries of this space. The project promotes common values, the implementation of joint tools and strengthening its quality assurance mechanisms to enhance collaboration and mobility among students, researchers and academics.

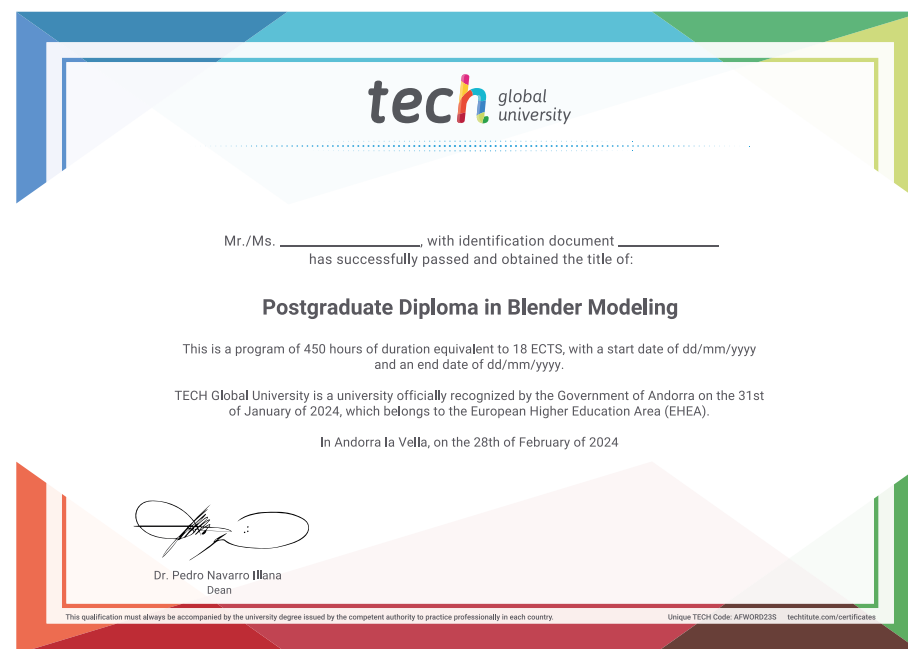
This **TECH Global University** title is a European program of continuous education and professional updating that guarantees the acquisition of competencies in its area of knowledge, conferring a high curricular value to the student who completes the program.

Title: **Postgraduate Diploma in Blender Modeling**

Modality: **online**

Duration: **6 months**

Accreditation: **18 ECTS**



*Apostille Convention. In the event that the student wishes to have their paper diploma issued with an apostille, TECH Global University 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 quality
online training
development language
classroom



Postgraduate Diploma Blender Modeling

- » Modality: online
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Postgraduate Diploma Blender Modeling

