

# Postgraduate Diploma Art for Virtual Reality with Blender, ZBrush, and UVS



## Postgraduate Diploma Art for Virtual Reality with Blender, ZBrush, and UVS

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

Website: [www.techtitute.com/pk/design/postgraduate-diploma/postgraduate-diploma-art-virtual-reality-blender-zbrush-uvs](http://www.techtitute.com/pk/design/postgraduate-diploma/postgraduate-diploma-art-virtual-reality-blender-zbrush-uvs)

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# 01

# Introduction

The artistic designer is the professional capable of getting the maximum creative potential out of Virtual Reality applied to video games. In this program, the students will be able to capture any artistic idea by learning the main techniques and tools used in the creative design software of the game industry. The specialized teaching team will lead the designer through this program in the development of artistic projects, from their conception to their materialization in creations for Virtual Reality video games. All with online learning adapted to the requirements of a powerful industry.







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*Learn 3D modeling and its application  
in video games with VR to perfection  
and scale your career”*

The video game industry, which uses Virtual Reality to attract more and more Gamers from all over the world and of all ages, is calling for experts in the graphic design of this specialty. This Postgraduate Diploma in Art for Virtual Reality with Blender, ZBrush, and UVS will allow students to reflect concepts and ideas in highly creative projects created with the most powerful programs in graphic design for the video game industry.

This program has expert teachers in the field of design and artistic creation of video games, who will bring students closer to the skills currently required by the most prominent studies in the sector. The professional experience of our teaching team will allow graphic designers to learn from the best in the industry about 3D modeling, the advantages and disadvantages of the use of certain tools, and the correct retopography and UV mapping.

This Postgraduate Diploma is a fantastic opportunity for graphic designers looking to broaden their career prospects in a highly competitive field. In addition, the program has the advantage of being 100% online, which gives students the necessary freedom to adapt the learning process to their own pace.

This **Postgraduate Diploma in Art for Virtual Reality with Blender, ZBrush, and UVS** 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 video game creation and design through Virtual Reality technology
- ◆ 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



*Devilish Games, Superlumen, and Sony Interactive Entertainment are waiting for your artistic potential. Dive into the world of VR video games thanks to this Postgraduate Diploma”*

“*Progress in your professional career thanks to the improvement you will achieve with this Postgraduate Diploma*”

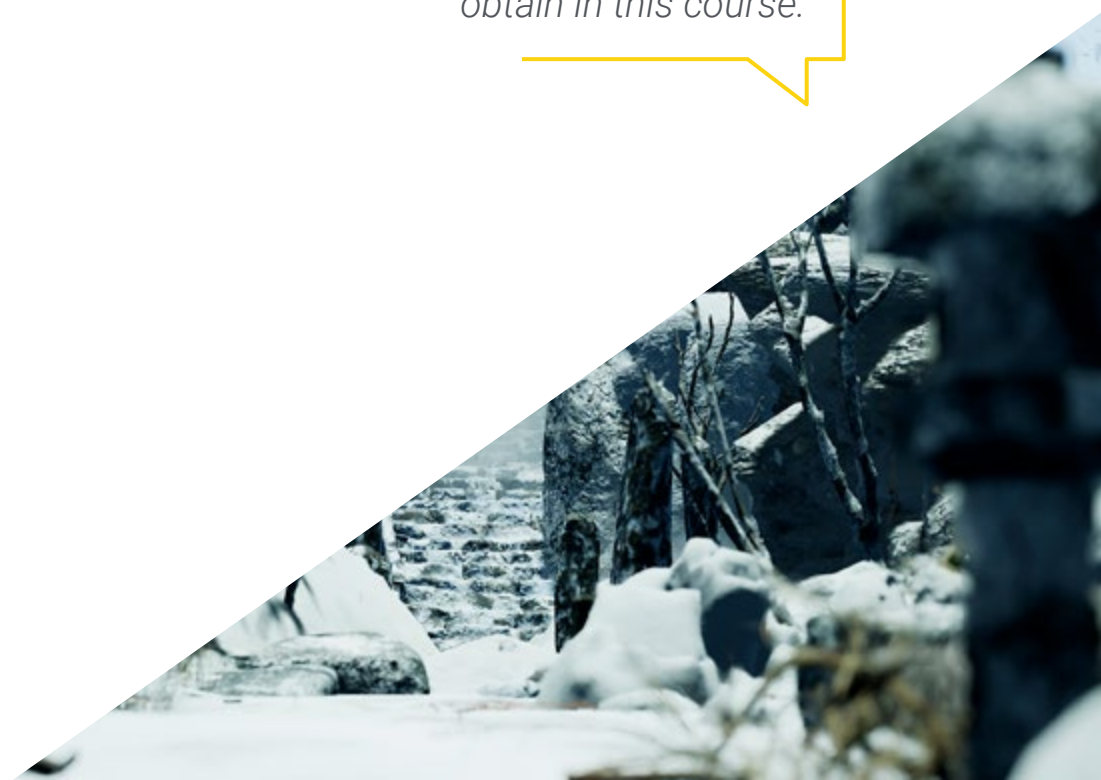
The program's teaching team includes professionals from the sector who contribute their work experience to this educational program, as well as renowned specialists from leading societies and prestigious universities.

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 academic year. For this purpose, the student will be assisted by an innovative interactive video system created by renowned and experienced experts.

*Show your full potential with the learning acquired in this Postgraduate Diploma. The VR gaming industry is waiting for you.*

*Increase your professional possibilities in the video game industry with the tools you will obtain in this course.*



# 02

# Objectives

The main goal of this Postgraduate Diploma is for creative designers to advance their careers by mastering the most prominent graphic design programs in the VR video game industry. The syllabus will allow you to acquire the necessary knowledge to develop 3D objects, designed and elaborated with the appropriate techniques for each project. The wide range of multimedia resources, complementary readings, and the Relearning methodology applied by TECH will help students achieve their most ambitious goals.





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*Learning through the Relearning methodology guarantees you a better understanding of the contents”*



## General Objectives

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- ◆ Understand the advantages and constraints provided by Virtual Reality
- ◆ Develop high-quality hard surface modeling
- ◆ Create high-quality organic modeling
- ◆ Understand the principles of retopology
- ◆ Understand the principles of UVS
- ◆ Master baking in Substance Painter
- ◆ Expertly manage layers
- ◆ Be able to create a dossier and submit works at a professional level, at the highest quality
- ◆ Make a conscious decision as to which programs best fit your Pipeline



*Your advanced knowledge will allow you to surpass the rest of the competitors in the race of Virtual Reality graphic design for video games. Enroll and move on to the next phase”*







## Specific Objectives

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### Module 1. ZBrush

- ◆ Be able to create any kind of meshes to start modeling
- ◆ Be able to create any type of mask
- ◆ Master IMM and Curve brushes
- ◆ Transform a low-poly model into high-poly one
- ◆ Create high-quality organic modeling

### Module 2. Retopology

- ◆ Master ZBrush retopology
- ◆ Learn when to use ZRemesher, Decimation Master, and ZModeler
- ◆ Be able to do the retopology of any modeling
- ◆ Master the specialized professional tool Topogun
- ◆ Train the professional in the creation of complex retopos

### Module 3. UVS

- ◆ Master the UVS tools available in ZBrush
- ◆ Learn where to cut a modeling
- ◆ Get the best out of the UV space
- ◆ Master the UV specialized tool Rizom

# 03

# Course Management

The teaching of innovative, up-to-date, and in-demand content in the labor market requires specialized professionals. For this reason, and in order to provide an elite education for all, TECH has selected a teaching team with extensive experience in the field of design and artistic creation of video games. This program has been designed by specialists who will accompany the students to become leading designers in the video game sector.





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*A professional and distinguished teaching team will accompany you in the learning process, allowing you to design VR video games artistically”*

## Management



### Mr. Menéndez Menéndez, Antonio Iván

- Senior environment and element artist and 3D consultant at The Glimpse Group VR
- 3D model designer and texture artist at Inmoreality
- Props and environment artist for PS4 games at Rascal Revolt
- Graduated in Fine Arts at the UPV
- Specialist in Graphic Techniques from the University of the Basque Country
- Master's Degree in Sculpture and Digital Modeling by the Voxel School of Madrid
- Master's Degree in Art and Design for Video Games by U-Tad University of Madrid

## Professors

### Mr. Márquez Maceiras, Mario

- ♦ Audiovisual operator PTM Pictures That Moves
- ♦ Gaming tech support agent at 5CA
- ♦ 3D and VR environment creator and designer at Inmoreality
- ♦ Art designer at Seamantis Games
- ♦ Founder of Evolve Games
- ♦ Graduated in Graphic Design at the School of Art of Granada
- ♦ Graduated in Video Games and Interactive Content Design at the School of Art of Granada
- ♦ Master's Degree in Game Design by U-Tad University of Madrid

### Mr. Morro, Pablo

- ♦ 3D Artist specialized in modeling, VFX, and textures
- ♦ 3D Artist at Mind Trips
- ♦ Graduated in Video Game Creation and Design at Jaume I University





# 04

## Structure and Content

The syllabus of this Postgraduate Diploma is made up of three modules, where the main programs used by graphic designers to transform their ideas into creations for Virtual Reality video games are studied in depth. The students have a wide variety of multimedia resources that can be downloaded to be viewed at any time and from any device with an Internet connection to expand their knowledge.





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*Get the most out of a syllabus designed by and for graphic designers looking to expand their focus on the VR video game industry”*

## Module 1. ZBrush

- 1.1. ZBrush
  - 1.1.1. Polymesh
  - 1.1.2. Subtools
  - 1.1.3. Gizmo 3D
- 1.2. Creating Meshes
  - 1.2.1. Quick Mesh and Primitives
  - 1.2.2. Mesh Extract
  - 1.2.3. Booleans
- 1.3. Sculpting
  - 1.3.1. Symmetry
  - 1.3.2. Main Brushes
  - 1.3.3. Dynamesh
- 1.4. Masks
  - 1.4.1. Brushes and the Mask Menu
  - 1.4.2. Brush Masks
  - 1.4.3. Polygroups
- 1.5. Organic Prop K's Sculpting
  - 1.5.1. Low-Poly Sculpting
  - 1.5.2. Low-Poly Sculpting Evolution
  - 1.5.3. Low-Poly Sculpting Final Assessment
- 1.6. IMM Brushes
  - 1.6.1. Controls
  - 1.6.2. Inserting Multi Mesh
  - 1.6.3. Creating IMM Brushes
- 1.7. Curve Brushes
  - 1.7.1. Controls
  - 1.7.2. Creating Curve Brushes
  - 1.7.3. IMM Curve Brushes

- 1.8. High Poly
  - 1.8.1. Subdivisions and Dynamic Subdivisions
  - 1.8.2. HD-Geometry
  - 1.8.3. Projecting Noise
- 1.9. Other Types of Mesh
  - 1.9.1. MicroMesh
  - 1.9.2. NanoMesh
  - 1.9.3. ArrayMesh
- 1.10. High Poly Organic Prop Sculpting
  - 1.10.1. Prop Sculpting
  - 1.10.2. Prop Sculpting Evolution
  - 1.10.3. Prop Sculpting Final Assessment

## Module 2. Retopology

- 2.1. Retopology in ZBrush-ZRemesher
  - 2.1.1. ZRemesher
  - 2.1.2. Guidelines
  - 2.1.3. Examples:
- 2.2. Retopology in ZBrush-Decimation Master
  - 2.2.1. Decimation Master
  - 2.2.2. Combining It with Brushes
  - 2.2.3. Workflow
- 2.3. Retopology in ZBrush-ZModeler
  - 2.3.1. ZModeler
  - 2.3.2. Modes
  - 2.3.3. Correcting Meshes
- 2.4. Prop Retopology
  - 2.4.1. Hard Surface Prop Retopology
  - 2.4.2. Organic Prop Retopology
  - 2.4.3. Hand Retopology

- 2.5. Topogun
    - 2.5.1. Advantages of Topogun
    - 2.5.2. The Interface
    - 2.5.3. Import
  - 2.6. Tools: Edit
    - 2.6.1. Simple Edit Tool
    - 2.6.2. Simple Create Tool
    - 2.6.3. Draw Tool
  - 2.7. Tools: Bridge
    - 2.7.1. Bridge Tool
    - 2.7.2. Brush Tool
    - 2.7.3. Extrude Tool
  - 2.8. Tools: Tubes
    - 2.8.1. Tubes Tool
    - 2.8.2. Symmetry Set-Up
    - 2.8.3. Feature Subdivision and Map Baking
  - 2.9. Head Retopology
    - 2.9.1. Facial Loops
    - 2.9.2. Mesh Optimization
    - 2.9.3. Export
  - 2.10. Full Body Retopology
    - 2.10.1. Body Loops
    - 2.10.2. Mesh Optimization
    - 2.10.3. VR Requirements
- Module 3. UVS**
- 3.1. Advanced UVS
    - 3.1.1. Warnings
    - 3.1.2. Cuts
    - 3.1.3. Texture Density
  - 3.2. Creating UVS in ZBrush-UVMaster
    - 3.2.1. Controls
    - 3.2.2. Unwrap
    - 3.2.3. Unusual Topology
  - 3.3. UVMaster: Painting
    - 3.3.1. Painting Control
    - 3.3.2. Creating Seams
    - 3.3.3. Checkseams
  - 3.4. UVMaster: Packing
    - 3.4.1. UV Packing
    - 3.4.2. Creating Islands
    - 3.4.3. Flatten
  - 3.5. UVMaster: Clones
    - 3.5.1. Working With Clones
    - 3.5.2. Polygroups
    - 3.5.3. Painting Control
  - 3.6. Rizom UV
    - 3.6.1. Rizom Script
    - 3.6.2. The Interface
    - 3.6.3. Importing With or Without UVS
  - 3.7. Seams and Cuts
    - 3.7.1. Keyboard Shortcuts
    - 3.7.2. 3D Panel
    - 3.7.3. UV Panel
  - 3.8. UV Unwrap and Layout Panel
    - 3.8.1. Unfold
    - 3.8.2. Optimize
    - 3.8.3. Layout and Packing
  - 3.9. UV: More Tools
    - 3.9.1. Align, Straighten, Flip, and Fit
    - 3.9.2. TopoCopy and Stack1
    - 3.9.3. Edge Loop Parameters
  - 3.10. Advanced UV Rizom
    - 3.10.1. Auto Seams
    - 3.10.2. UVS Channels
    - 3.10.3. Texel Density

# 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 photograph of a desk with a laptop, a blue marker, and a pen. The laptop is open, and the marker and pen are lying on the desk next to it. The background is a teal gradient.

“

*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.*



*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.



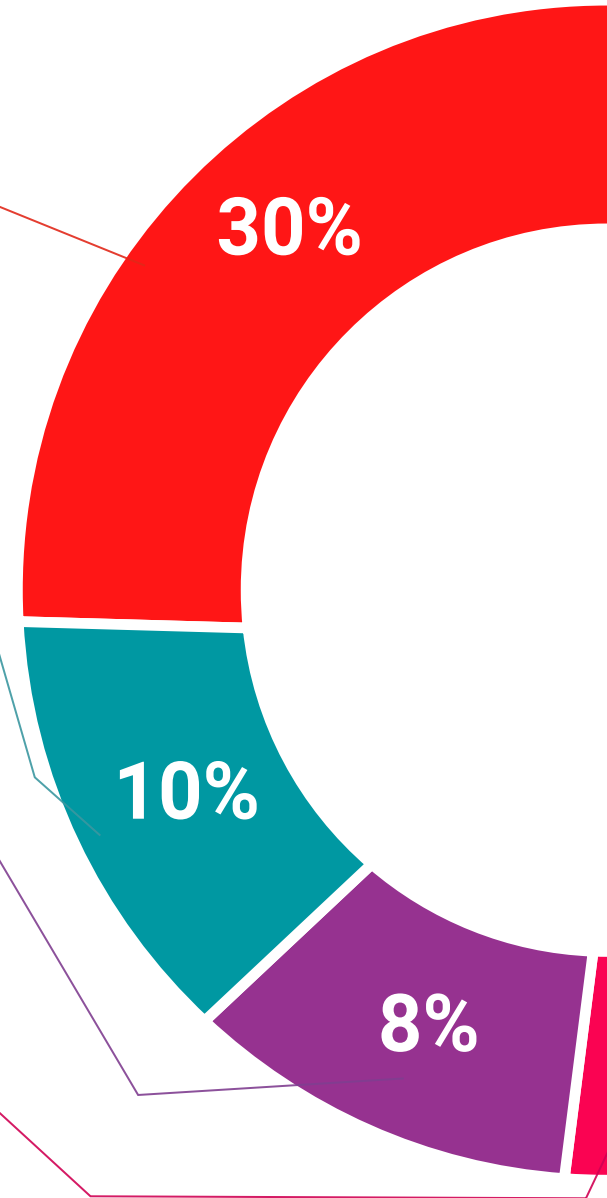
#### Practising Skills and Abilities

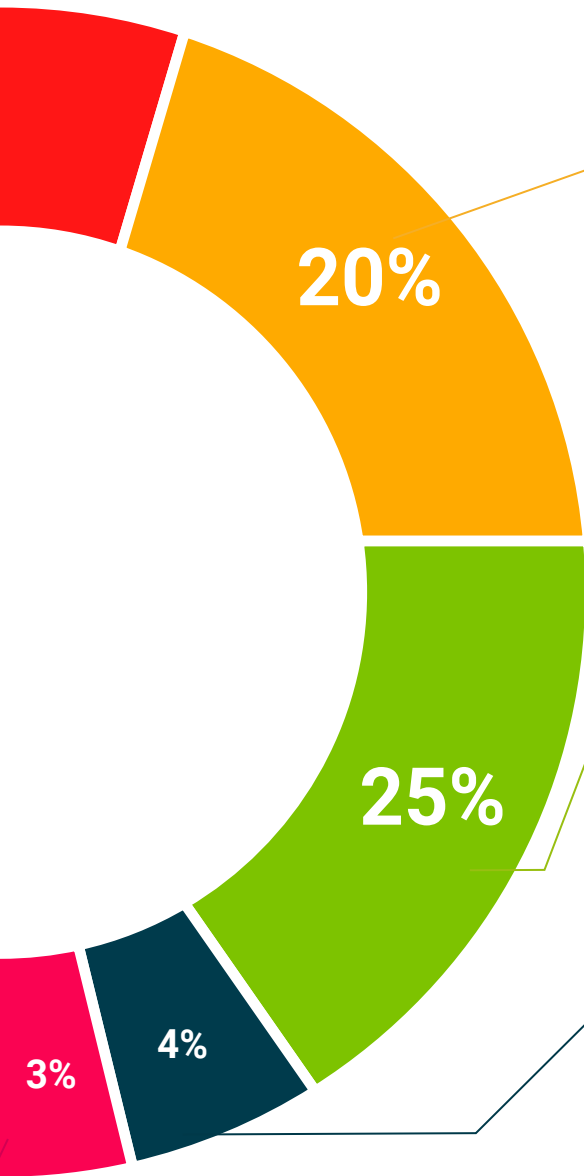
They will carry out activities to develop specific skills and abilities in each subject area. Exercises and activities to acquire and develop the skills and abilities that a specialist needs to develop in the context of the globalization that we are experiencing.



#### 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 Diploma in Art for Virtual Reality with Blender, ZBrush, and UVS guarantees students, in addition to the most rigorous and up-to-date education, access to a Postgraduate Diploma issued by TECH Technological University.



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*Successfully complete this program and receive your university qualification without having to travel or fill out laborious paperwork"*

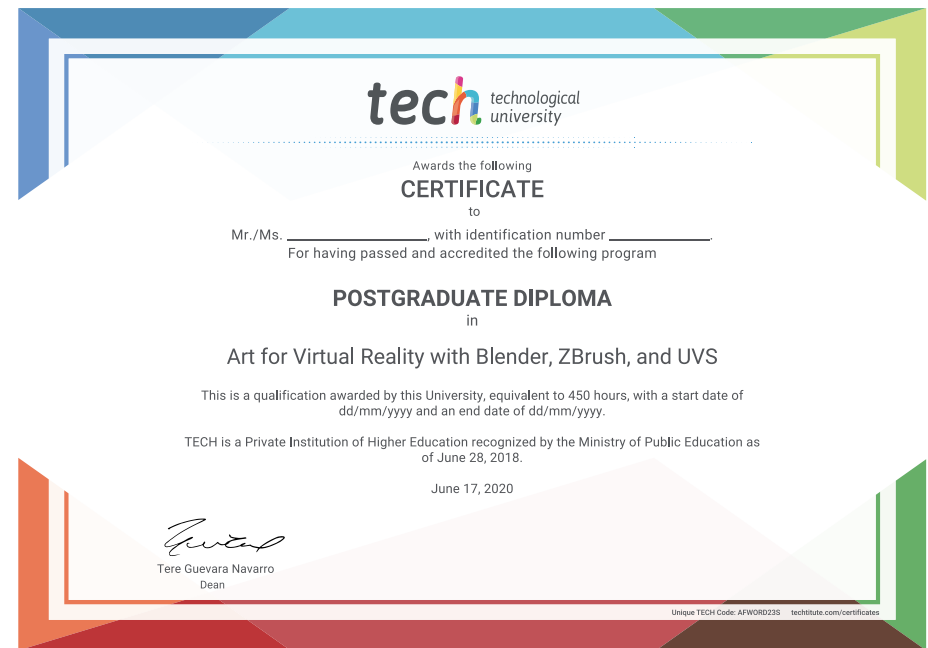
This **Postgraduate Diploma in Art for Virtual Reality with Blender, ZBrush, and UVS** contains the most complete and up-to-date program on the market.

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 career evaluation committees.

Title: **Postgraduate Diploma in Art for Virtual Reality with Blender, ZBrush, and UVS**

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 language  
virtual classroom

**tech** technological  
university

## Postgraduate Diploma Art for Virtual Reality with Blender, ZBrush, and UVS

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