

# Postgraduate Diploma

Art for Virtual Reality with Substance  
Painter and Marmoset





## Postgraduate Diploma Art for Virtual Reality with Substance Painter and Marmoset

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

Website: [www.techtute.com/in/design/postgraduate-diploma/postgraduate-diploma-art-virtual-reality-substance-painter-marmoset](http://www.techtute.com/in/design/postgraduate-diploma/postgraduate-diploma-art-virtual-reality-substance-painter-marmoset)

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# 01

# Introduction

Realism in the design of Virtual Reality video games is a prerequisite to perfectly immerse in the game. To achieve this perfection, video game graphic designers will master two essential programs for 3D modeling: Substance Painter and Marmoset. This course, taught 100% online, will lead students to the generation, modification, and rendering of VR-focused materials, which will allow them to progress in their professional career. All this paired up with an exceptional flexibility to be able to adapt the entire syllabus to your own pace, without the pressure of face-to-face classes or fixed schedules.



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*Materializing your art according to the VR video game industry standards can be possible if you enroll in this Postgraduate Diploma"*

This Postgraduate Diploma in Art for Virtual Reality with Substance Painter and Marmoset provides graphic designers with the essential knowledge to materialize their Virtual Reality project ideas for the video game industry.

All designers looking to take a leap in their professional careers must have a perfect knowledge of the software used by the main studios for the creation of 3D modeling. Constantly updates their skills, improving creation of more defined textures, and obtaining an optimal final work can only be achieved with a comprehensive and up-to-date specialization.

To achieve this, this Postgraduate Diploma is led by a specialized faculty with experience in the field of graphic design of VR video games. Its approach, close to the current job market, will facilitate learning for designers seeking a certificate with guaranteed success.

A unique opportunity to acquire a specialization that differentiates professional designers from the rest of the competitors in a sector that is increasingly in demand. Its 100% online format allows students to make their work and personal lives compatible, as well as to consolidate the knowledge acquired thanks to the multimedia resources and the Relearning study system.

This **Postgraduate Diploma in Art for Virtual Reality with Substance Painter and Marmoset** 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 the self-assessment process can be carried out to improve learning
- ◆ Its special emphasis on innovative methodologies
- ◆ Theoretical lessons, questions to the expert, debate forums on controversial topics, and individual reflection assignments
- ◆ Content that is accessible from any fixed or portable device with an Internet connection



*Reaffirm yourself as a great graphic design professional for VR video games and keep your 3D modeling skills up to date"*

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*Make the big VR game studios want to count on you. Acquire the necessary skills to be among the best”*

The program's teaching staff 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 talent in 3D modeling thanks to the mastery of the most used graphic design software.*

*Enroll in a Postgraduate Diploma that will allow you to advance in your professional career.*



# 02 Objectives

In this syllabus, graphic designers will be able to develop a 3D modeling project from start to finish thanks to the knowledge acquired in the main design programs oriented to Virtual Reality. Students will understand the principles of retopology and UVS and will master baking in a professional manner. For this purpose, they will be accompanied by a specialized teaching team, who will use practical situations as a starting point to facilitate learning.







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*Our online format and multiple multimedia resources will allow you to achieve your objectives in an easier and more practical way”*



## General Objectives

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- ◆ Understand the advantages and constraints provided by Virtual Reality
- ◆ Develop high-quality hard surface 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 jobs at a professional level, at the highest quality
- ◆ Make a conscious decision as to which programs best fit your Pipeline



*Your up-to-date knowledge will make a difference in a professional environment in the video game industry that is always looking for excellence”*





## Specific Objectives

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### Module 1. Substance Painter

- ◆ Use substance textures in a smart way
- ◆ Be able to create any type of mask using Substance Painter
- ◆ Master generators and filters using Substance Painter
- ◆ Create high-quality textures for a hard surface modeling with Substance Painter
- ◆ Create high-quality textures for an organic modeling with Substance Painter
- ◆ Design a good rendering to show props using Substance Painter

### Module 2. Marmoset

- ◆ Analyze this tool in depth and give the professional an idea of its advantages
- ◆ Create any type of mask using Marmoset
- ◆ Manage generators and filters using Marmoset
- ◆ Create high-quality textures for a hard surface modeling with Marmoset
- ◆ Create high-quality textures for an organic modeling with Marmoset
- ◆ Create a good rendering to show props using Marmoset

### Module 3. Baking

- ◆ Understand the principles of baking
- ◆ Learn how to solve the problems that may arise when baking a model
- ◆ To be able to bake any modeling
- ◆ Master real-time baking in Marmoset

03

# Course Management

The teaching team that has been selected by TECH meets the requirements to offer an education close to the labor market, which allows graphic designers to progress in their professional career. That is why this six-week program has qualified professionals in the design and creation of VR video games, who will delve into the main tools for 3D modeling along with the students.



“

*A specialized teaching team will guide you to perfect your skills in the graphic design of VR video games”*

## 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



# 04

# Structure and Content

The syllabus of this Postgraduate Diploma has been developed by a teaching team carefully selected by TECH to provide the necessary and useful concepts for graphic designers who wish to perfect their creations for VR video games. In this way, three modules have been created, in which students are immersed in the creation of a project, delving into each of the elements that make up the design up to its export. To this end, students are provided with audiovisual material, additional readings, and practical simulations that allow them to combine the consolidation of knowledge with enjoyable learning.







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*Learn all the elements that make up 3D modeling and obtain excellent graphic design thanks to our Postgraduate Diploma”*

## Module 1. Substance Painter

- 1.1. Creating a Project
  - 1.1.1. Importing Maps
  - 1.1.2. UVS
  - 1.1.3. Baking
- 1.2. Layers
  - 1.2.1. Types of Layers
  - 1.2.2. Layer Options
  - 1.2.3. Materials
- 1.3. Painting
  - 1.3.1. Types of Brushes
  - 1.3.2. Filling Projections
  - 1.3.3. Advance Dynamic Painting
- 1.4. Effects
  - 1.4.1. Filling
  - 1.4.2. Levels
  - 1.4.3. Anchor Points
- 1.5. Masks
  - 1.5.1. Alphas
  - 1.5.2. Procedurals and Grunges
  - 1.5.3. Hard Surfaces
- 1.6. Generators
  - 1.6.1. Generators
  - 1.6.2. Uses
  - 1.6.3. Examples
- 1.7. Filters
  - 1.7.1. Filters
  - 1.7.2. Uses
  - 1.7.3. Examples
- 1.8. Hard Surface Prop Texturing
  - 1.8.1. Prop Texturing
  - 1.8.2. Prop Texturing Evolution
  - 1.8.3. Prop Texturing Final Assessment

- 1.9. Texturing Organic Prop
  - 1.9.1. Prop Texturing
  - 1.9.2. Prop Texturing Evolution
  - 1.9.3. Prop Texturing Final Assessment
- 1.10. Render
  - 1.10.1. IRay
  - 1.10.2. Post-Processing
  - 1.10.3. Col Use

## Module 2. Marmoset

- 2.1. The Alternative
  - 2.1.1. Import
  - 2.1.2. Interface
  - 2.1.3. Viewport
- 2.2. Classic
  - 2.2.1. Scene
  - 2.2.2. Tool Settings
  - 2.2.3. History
- 2.3. Inside Scene
  - 2.3.1. Render
  - 2.3.2. Main Camera
  - 2.3.3. Sky
- 2.4. Lights
  - 2.4.1. Types
  - 2.4.2. Shadow Catcher
  - 2.4.3. Fog
- 2.5. Texture
  - 2.5.1. Texture Project
  - 2.5.2. Map Import
  - 2.5.3. Viewport

- 2.6. Layers: Paint
  - 2.6.1. Paint Layer
  - 2.6.2. Fill Layer
  - 2.6.3. Group
- 2.7. Layers: Adjustments
  - 2.7.1. Adjustment Layer
  - 2.7.2. Input Processor Layer
  - 2.7.3. Procedural Layer
- 2.8. Layers: Mask
  - 2.8.1. Mask
  - 2.8.2. Channels
  - 2.8.3. Maps
- 2.9. Materials
  - 2.9.1. Types of Material
  - 2.9.2. Settings
  - 2.9.3. Applying Them to the Scene
- 2.10. Dossier
  - 2.10.1. Marmoset Viewer
  - 2.10.2. Exporting Render Images
  - 2.10.3. Exporting Videos

## Module 3. Baking

- 3.1. Model Baking
  - 3.1.1. Preparing the Model for Baking
  - 3.1.2. Baking Principles
  - 3.1.3. Processing Options
- 3.2. Model Baking: Painter
  - 3.2.1. Baking in Painter
  - 3.2.2. Low Poly Baking
  - 3.2.3. High Poly Baking
- 3.3. Model Baking: Boxes
  - 3.3.1. Using Boxes
  - 3.3.2. Adjusting Distances
  - 3.3.3. Computing Tangent Space per Fragment
- 3.4. Map Baking
  - 3.4.1. Normal
  - 3.4.2. ID
  - 3.4.3. Ambient Occlusion
- 3.5. Map Baking: Curvatures
  - 3.5.1. Curvature
  - 3.5.2. Thickness
  - 3.5.3. Improving Map Quality
- 3.6. Baking in Marmoset
  - 3.6.1. Marmoset
  - 3.6.2. Functions
  - 3.6.3. Real-Time Baking
- 3.7. Setting Up the Document for Baking in Marmoset
  - 3.7.1. High Poly and Low Poly in 3DS Max
  - 3.7.2. Organizing the Scene in Marmoset
  - 3.7.3. Verifying That Everything Is Correct
- 3.8. Bake Project Panel
  - 3.8.1. Bake Group, High and Low
  - 3.8.2. The Geometry Menu
  - 3.8.3. Load
- 3.9. Advanced Options
  - 3.9.1. Output
  - 3.9.2. Adjusting the Cage
  - 3.9.3. Setting Up Maps
- 3.10. Baking
  - 3.10.1. Maps
  - 3.10.2. Result Preview
  - 3.10.3. Baking Floating Geometry

# 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.





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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"*

## 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.



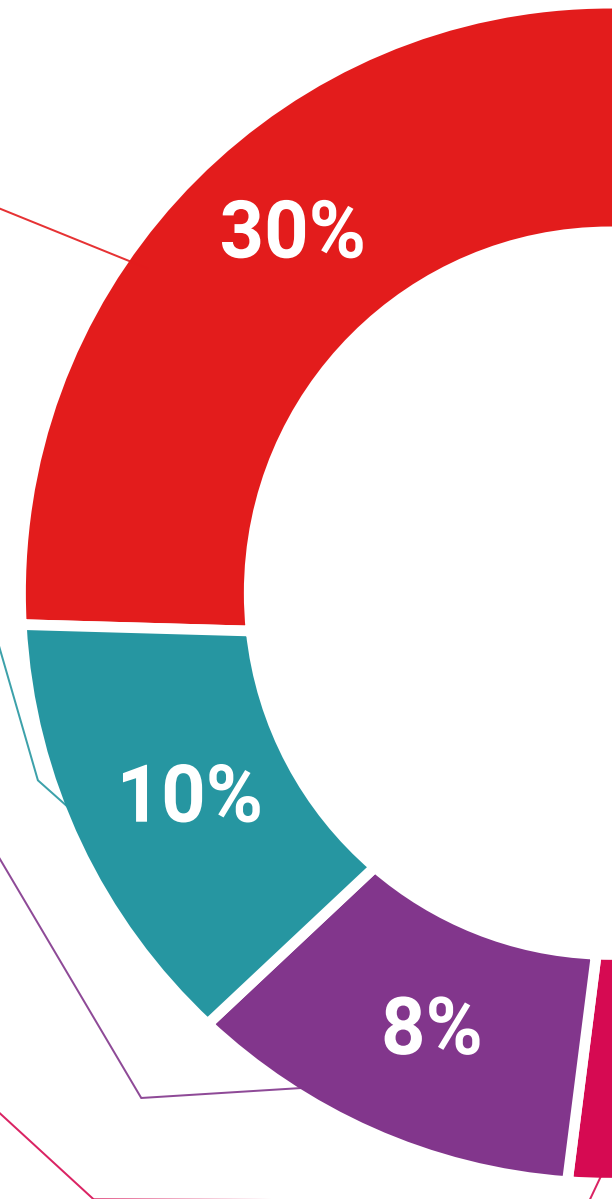
### Practising Skills and Abilities

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



### Additional Reading

Recent articles, consensus documents and international guidelines, among others. In TECH's virtual library, students will have access to everything they need to complete their course.





#### Case Studies

Students will complete a selection of the best case studies chosen specifically for this program. Cases that are presented, analyzed, and supervised by the best specialists in the world.



#### Interactive Summaries

The TECH team presents the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

This exclusive educational system for presenting multimedia content was awarded by Microsoft as a "European Success Story".



#### Testing & Retesting

We periodically evaluate and re-evaluate students' knowledge throughout the program, through assessment and self-assessment activities and exercises, so that they can see how they are achieving their goals.



# 06 Certificate

The Postgraduate Diploma in Art for Virtual Reality with Substance Painter and Marmoset 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”*

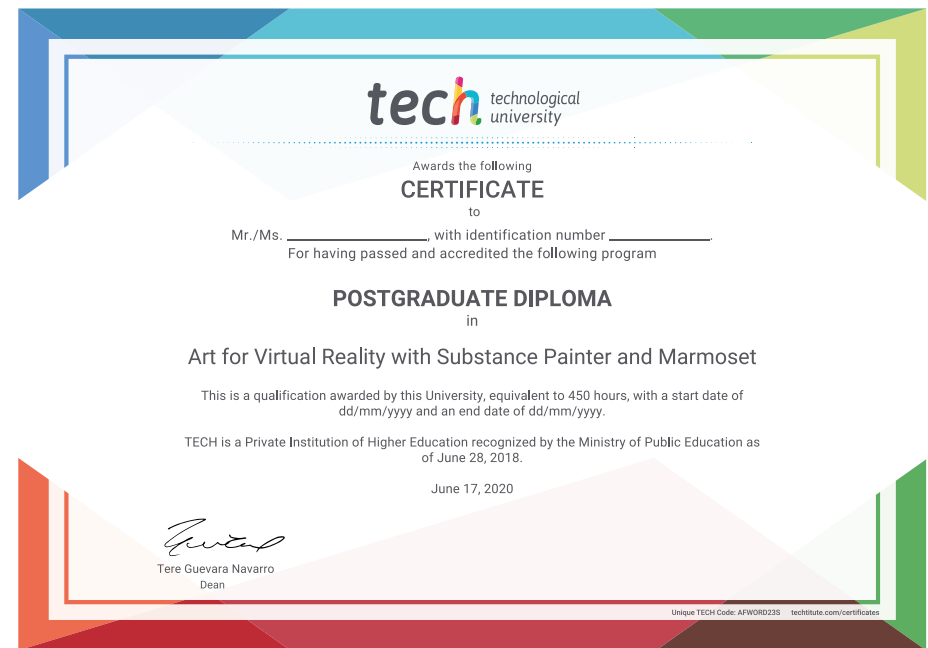
This **Postgraduate Diploma in Art for Virtual Reality with Substance Painter and Marmoset** contains the most complete and up-to-date program on the market.

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 Substance Painter and Marmoset**

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  
online training  
development language  
classroom



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