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

tech technological university

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# Postgraduate Diploma
## Virtual Reality Art 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.techtitute.com/pk/videogames/postgraduate-diploma/postgraduate-diploma-virtual-reality-art-substance-painter-marmoset

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# Introduction

Nearly 2 million video game users will play with Virtual Reality technology by 2023. Figures that lead studios and creators to be in a race for constant perfection. That is why, in this program the Video Game professionals will enter fully into the latest updates of the two most powerful tools in Video Game Graphic Design: the Substance Painter and Marmoset. With an online syllabus and a wide range of quality multimedia resources, students will conclude this program prepared to compete with the best artistic skills for VR Videogame Graphics.


*Being a true VR Video Game Graphic Artist is at your fingertips. Get on track with this Postgraduate Diploma aimed at launching your career towards your professional zenith"*

This Postgraduate Diploma in Virtual Reality Art using Substance Painter and Marmoset allows the Video Game professional to perfectly understand how to prepare a quality *Baking* thanks to the use of two of the most outstanding software in the field of VR Video Game design.

The professionals in this field, who wish to boost their career and be part of the most relevant studios in this expanding industry, must handle the different toolkits with which these companies usually work. Mastering the software that allow an optimal *baking* and texturing is a plus in this competitive industry.

That is why, in this program, the specialized teaching staff will explain in detail the concepts that every graphic professional must master to design a title with guarantees of success.

An excellent opportunity to specialize, with the advantage of being able to acquire knowledge in a 100% online format that gives students total freedom in their learning. In addition, there is a wide range of multimedia resources and a unique Relearning system that will allow them to grow in their professional field.

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

- 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

*Keep up to date in a field of Video Game Graphic Design that in constant transformation and growth"*

*You are here, you know what you want and you are just one step away from continuing to grow in the Graphic Art of VR Video Games. You just need to take the step and enroll"*

*Acquire the essential skills to make big game studios want you in their team.*

*Transform the market with your artistic designs by learning about Virtual Reality Video Games with this Postgraduate Diploma.*

The program includes, in its teaching staff, professionals from the sector who bring to this program the experience of their work, in addition to recognized specialists from prestigious reference societies and universities.

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

This program's design focuses on Problem-Based Learning, through which the professional must try to solve the different professional practice situations that arise during the academic program. For this purpose, it will be aided by an innovative system of interactive videos produced by renowned experts.

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# Objectives

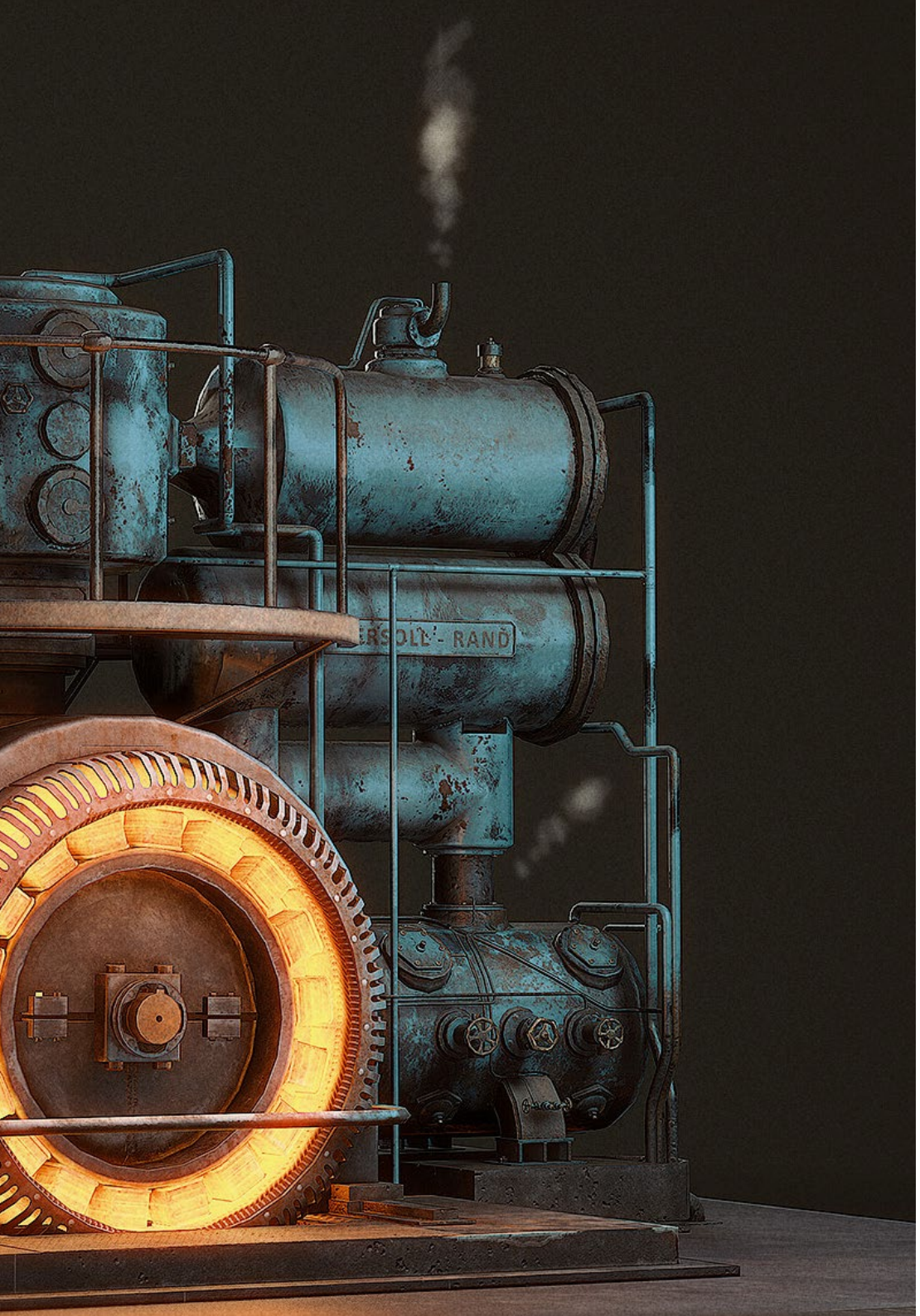
In this program, the Video Game professionals will be able to enhance their Artistic Design skills with the mastery of the essential elements that are used in the leading programs in the VR Video Game field. The specialized teaching team explains in detail with a practical approach in each of the pieces of design software that addresses this program, giving the professional the opportunity to grow in the Video Game field.


*Online learning will allow you to have the flexibility you need to combine your job with this University Expert"*

## General Objectives

- 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

*Updating your knowledge will make the difference for your future career in the Video Game industry, standing out thanks to your skills and expertise in the handling of Substance Painter and Marmoset"*





## Specific Objectives

### Module 1. Substance Painter

- Use substance textures in a smart way
- Be able to create any type of mask
- Master generators and filters
- Do high-quality textures for a hard surface modeling
- Do quality textures for an organic modeling
- Be able to do a good Render to show the Props

### Module 2. Marmoset

- Analyze this tool in depth and give the professional an idea of its advantages
- Be able to create any type of mask
- Master generators and filters
- Do high-quality textures for a hard surface modeling
- Do quality textures for an organic modeling
- Be able to do a good Render to show the Props

### Module 3. Baking

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

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# Course Management

The professionals who make up the teaching staff have been carefully selected by TECH Technological University to offer students a quality and elite education for all. That is why, in this program the Video Game professionals will be guided by experts who master to perfection a subject that requires increasingly qualified personnel. The extensive background of the teachers in the use of Substance Painter and Marmoset confers a distinctively practical touch to all the theoretical contents provided.

*A specialized body that will be able to make you grow and put into operation your artistic creations for 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

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# Structure and Content

The program, developed by the teaching staff selected by TECH Technological University, is designed so that the Virtual Reality Video Game professional is able to integrate the vital concepts for a graphic project at the level of the major studios in the Video Game industry. For this purpose, the syllabus has been divided into three modules, in which each one of the main programs for the creation of artistic design for Video Games is studied in detail. All this is complemented with multimedia material, additional readings and practical simulations, which allow the Video Game professional to achieve a more comprehensive and solid learning.

*Optimize all the resources that 3D design and creation software for VR games put at your fingertips, thanks to this 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. Organic Prop Texturing
- 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: Masks
- 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

*This Postgraduate Diploma program facilitates learning in 3D design with a range of resources and a unique Relearning system"*

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# Methodology

This academic program offers students a different way of learning. Our methodology uses a cyclical learning approach: **Relearning**.

This teaching system is used, for example, in the most prestigious medical schools in the world, and major publications such as the **New England Journal of Medicine** have considered it to be one of the most effective.

*Discover 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.*

*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 has been the most widely used learning system among the world's leading business schools for as long as they have existed. The case method was developed in 1912 so that law students would not only learn the law based on theoretical content. It consisted of presenting students with real-life, complex situations for them to make informed decisions and value judgments on how to resolve them. In 1924, Harvard adopted it as a standard teaching method.

What should a professional do in a given situation? This is the question that you are presented with in the case method, an action-oriented learning method. Over the course of 4 years, you will be presented with multiple practical case studies. You will have to combine all your knowledge, and research, argue, and defend your ideas and decisions.

## Relearning Methodology

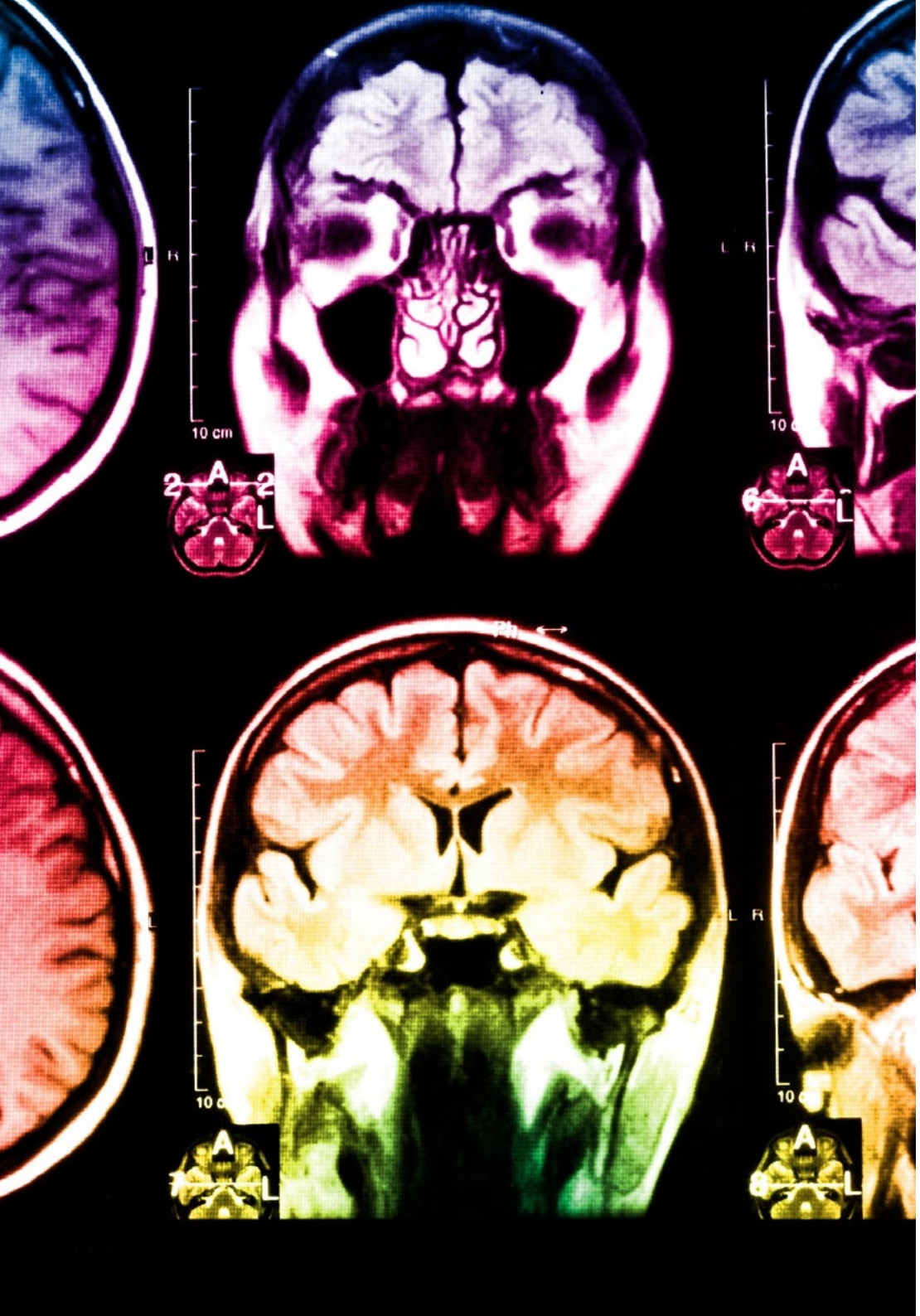
TECH effectively combines the Case Study methodology with a 100% online learning system based on repetition, which combines 8 different teaching elements in each lesson.

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. 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.

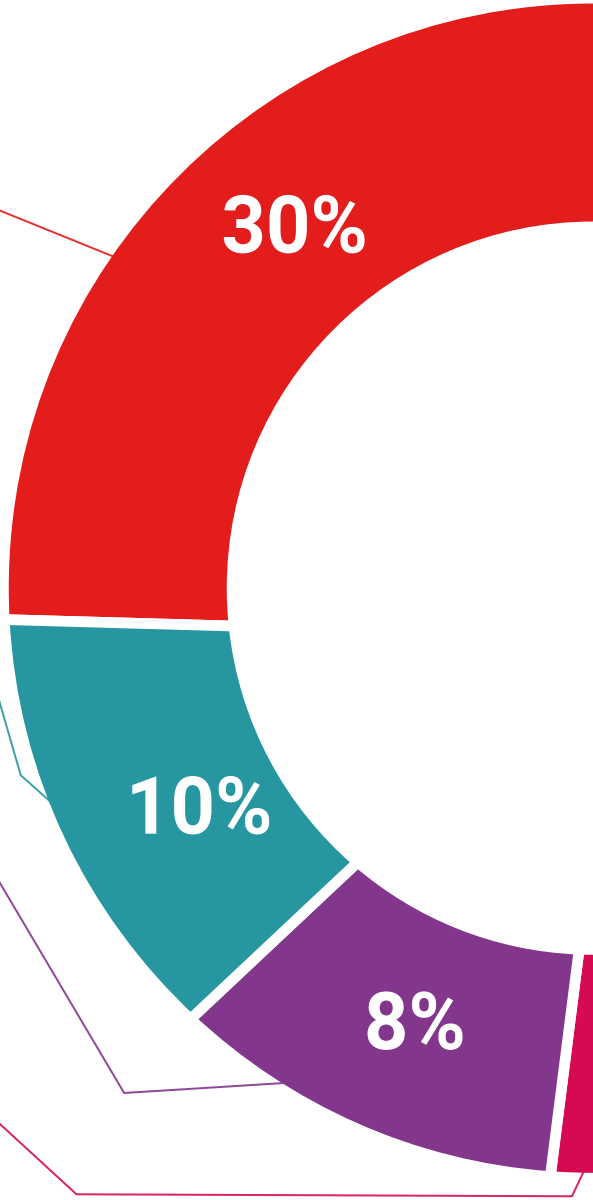
Learning from an Expert strengthens knowledge and memory, and generates confidence in future difficult decisions.

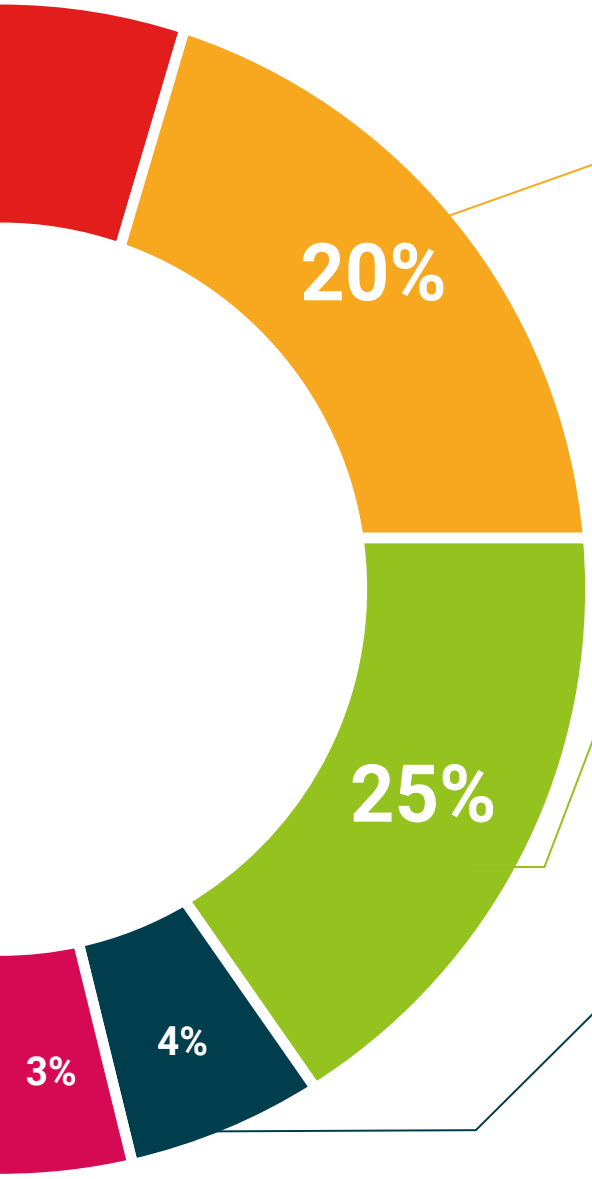
### Practising Skills and Abilities

They will carry out activities to develop specific 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 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

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.

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# Certificate

The Postgraduate Diploma in Virtual Reality Art 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.

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

This **Postgraduate Diploma in Virtual Reality Art 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 Virtual Reality Art with Substance Painter and Marmoset**

Official No. of Hours: **450 h.**


tech technological university

Awards the following

CERTIFICATE

to

Mr./Ms. _____, with identification number _____.

For having passed and accredited the following program

POSTGRADUATE CERTIFICATE

in

Virtual Reality Art with Substance Painter and Marmoset

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

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

June 17, 2020

Tere Guevara Navarro

Dean

Unique TECH Code: AFWORD23S techtitute.com/certificates

*Apostille Convention. In the event that the student wishes to have their paper certificate issued with an apostille, TECH EDUCATION will make the necessary arrangements to obtain it, at an additional cost.

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