Postgraduate Diploma
Baking, UVS, and Sci-Environments in Art for Virtual Reality

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Postgraduate Diploma
Baking, UVS, and Sci-Environments in Art for Virtual Reality

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

Website: www.techtitute.com/in/videogames/postgraduate-diploma/postgraduate-diploma-baking-uvs-sci-environment-art-virtual-reality

Index

01

Introduction

The creativity and quality of the graphic designs in Virtual Reality Video Games are highly valued by gamers. That is why the major studios are looking for professionals who master artistic creation software. In this Postgraduate Diploma, the professionals will be able to master the main tools and programs of Graphic Design in which very few are perfectly developed. Thanks to this program, the students will be able to realize a Sci-Fi from start to end following the guidelines set by a specialized teaching staff. All this, complemented with an online methodology, multimedia material, additional readings and case studies, which will provide the essential knowledge to make the leap in VR Video Game field.

Improve your knowledge and artistic skills with the best software of VR Video Game Graphic Design, thanks to our program"

This Postgraduate Diploma in Baking, UVS, and Sci-Environments in Art for Virtual Reality offers the possibility to the VR Video Game professionals to perfect their skills in the design and creation of titles in this industry. For this purpose, this program offers students a specialized teaching staff with extensive experience in the field of Virtual Reality Video Games.

This Postgraduate Diploma will provide the necessary knowledge in the different software used by the reference studios to perform quality UVs or Baking that results in a 3D object with low polygonal load. At the same time, it will demonstrate the correct development of a Graphic Design project in this sector from start to end.

The professionals in this field will be able, upon completion of this program, to acquire the necessary skills to work with complex specifications and software, giving a qualitative leap to their creations of 3D modeling for Video Games.

An opportunity to specialize with a Relearning methodology that will facilitate learning with multimedia resources, video summaries, complementary readings and simulations of real cases. All this, in a 100% online mode so that students can access the content whenever and wherever they wish, adapting the study to their own time.

This **Postgraduate Diploma in Baking, UVS, and Sci-Environments in Art for Virtual Reality** contains the most complete and updated educational program on the market. Its most outstanding features are:

- 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

Specialize in the competitive career of graphic design in Virtual Reality video games with this Postgraduate Diploma"

Advance your career by perfecting your skills and mastering creative VR game design software"

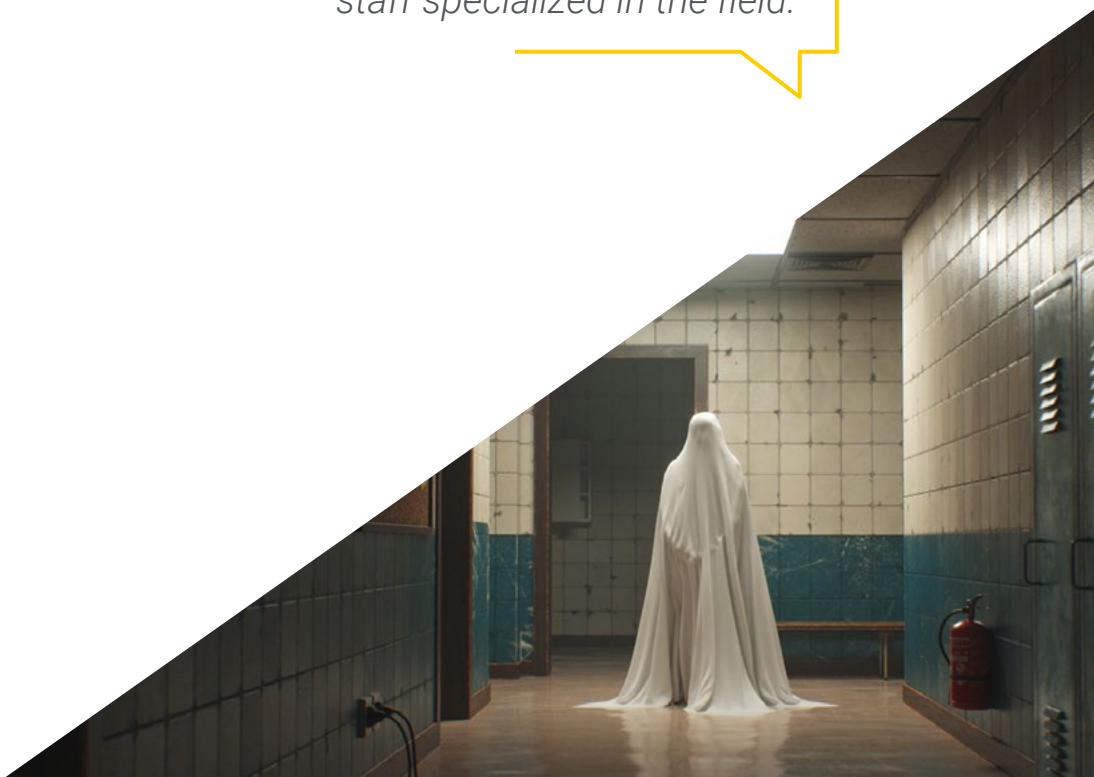
Access the knowledge that will expand your possibilities in the artistic industry of Virtual Reality Video Games.

Activate your career in the most powerful VR art studios in Video Games, guided by a teaching staff specialized in the field.

The program's teaching staff includes professionals from sector 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 professionals a situated and contextual learning, i.e., a simulated environment that will provide immersive education programmed to learn 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 arise during the academic year. For this purpose, students will be assisted by an innovative interactive video system developed by renowned experts.



02

Objectives

In this program, the Video Game professionals will understand the essential concepts to master textures, filters, baking and rendering to offer a 3D design of the highest quality. For this purpose, they will have a specialized teaching team in the field that will accompany students throughout the program to create a Sci-fi Environment from start to end, thus fulfilling their most ambitious professional goals.

The online modality of this program gives you the control of the learning process. Access it wherever and whenever you wish"

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

Master the multiple options offered by the 3D design software of the moment for VR Video Games with this Postgraduate Diploma"

Specific Objectives

Module 1. UVs

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

Module 2. 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

Module 3. Sci-Fi Environment

- Understand the knowledge acquired
- Understand the usefulness of all the tips applied to a real project
- Make a conscious decision as to which programs best fit your Pipeline
- Have a professional quality work in your dossier

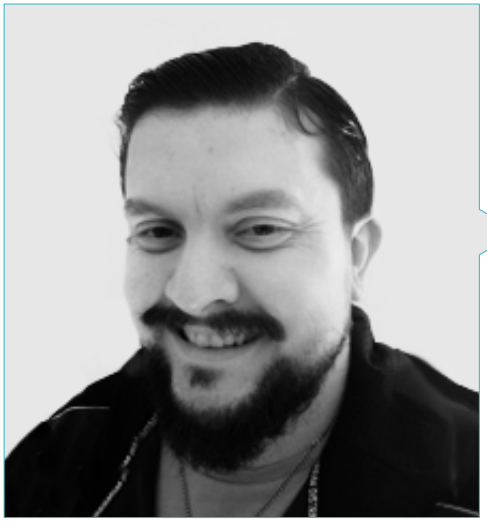
03

Course Management

The program of this Postgraduate Diploma has professionals from the industry of Graphic Design and Virtual Reality Video Games to offer students the best teaching. For this, TECH Technological University has made a careful selection of the teaching staff that will lead throughout the program to the professionals who seek to improve their knowledge and their artistic creations in a growing sector.

A specialized teaching staff will accompany you in this Postgraduate Diploma so that you can offer quality graphic designs in your VR-based video game projects"

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, prepared by the group of professors selected by TECH Technological University for this program, has been divided into three modules that will delve into the main software of Virtual Reality Graphic Design. Throughout this program, the elements that make up a quality design focused on VR and its final presentation to any renowned studio to which you want to access, will be unraveled. The syllabus is aimed at professionals of the industry who are looking to make a leap in their artistic designs and, for this purpose, have access to material rich in multimedia content, complementary readings, real simulations and a 100% online methodology.

Lead your artistic career in an expanding sector with the guarantee of mastering the main design software at your fingertips”

Module 1. UVs

1.1. Advanced UVs
- 1.1.1. Warnings
- 1.1.2. Cuts
- 1.1.3. Texture Density

1.2. Creating UVs in ZBrush-UVMaster
- 1.2.1. Controls
- 1.2.2. Unwrap
- 1.2.3. Unusual Topology

1.3. UV Master: Painting
- 1.3.1. Control Painting
- 1.3.2. Creating Seams
- 1.3.3. Checkseams

1.4. UV Master: Packing
- 1.4.1. UV Packing
- 1.4.2. Creating Islands
- 1.4.3. Flatten

1.5. UV Master: Clones
- 1.5.1. Working With Clones
- 1.5.2. Polygroups
- 1.5.3. Control Painting

1.6. Rizom UV
- 1.6.1. Rizom Script
- 1.6.2. The Interface
- 1.6.3. Importing With or Without UVS

1.7. Seams and Cuts
- 1.7.1. Keyboard Shortcuts
- 1.7.2. 3D Panel
- 1.7.3. UV Panel

1.8. UV Unwrap and Layout Panel
- 1.8.1. Unfold
- 1.8.2. Optimize
- 1.8.3. Layout and Packing

1.9. UV: More Tools
- 1.9.1. Align, Straighten, Flip, and Fit
- 1.9.2. TopoCopy and Stack1
- 1.9.3. Edge Loop Parameters

1.10. Advanced UV Rizom
- 1.10.1. Auto Seams
- 1.10.2. UVS Channels
- 1.10.3. Texel Density

Module 2. Baking

2.1. Model Baking
- 2.1.1. Preparing the Model for Baking
- 2.1.2. Baking Principles
- 2.1.3. Processing Options

2.2. Model Baking Painter
- 2.2.1. Baking in Painter
- 2.2.2. Low Poly Baking
- 2.2.3. High Poly Baking

2.3. Model Baking: Boxes
- 2.3.1. Using Boxes
- 2.3.2. Adjusting Distances
- 2.3.3. Computing Tangent Space per Fragment

2.4. Map Baking
- 2.4.1. Normal
- 2.4.2. ID
- 2.4.3. Ambient Occlusion

2.5. Map Baking: Curvatures
- 2.5.1. Curvature
- 2.5.2. Thickness
- 2.5.3. Improving Map Quality

2.6. Baking in Marmoset
- 2.6.1. Marmoset
- 2.6.2. Functions
- 2.6.3. Real-Time Baking

2.7. Setting Up the Document for Baking in Marmoset
- 2.7.1. High Poly and Low Poly in 3DS Max
- 2.7.2. Organizing the Scene in Marmoset
- 2.7.3. Verifying That Everything Is Correct

2.8. Bake Project Panel
- 2.8.1. Bake Group, High and Low
- 2.8.2. The Geometry Menu
- 2.8.3. Load

2.9. Advanced Options
- 2.9.1. Output
- 2.9.2. Adjusting the Cage
- 2.9.3. Setting Up Maps

2.10. Baking
- 2.10.1. Maps
- 2.10.2. Result Preview
- 2.10.3. Baking Floating Geometry

Module 3. Sci-Fi Environment

3.1. Sci-Fi Concept and Planning
- 3.1.1. References
- 3.1.2. Planning
- 3.1.3. Blockout

3.2. Implementation in Unity
- 3.2.1. Importing Blockout and Verifying Scaling
- 3.2.2. Skybox
- 3.2.3. Files and Preliminary Materials

3.3. Module 1: Floors
- 3.3.1. High to Low Modular Modeling
- 3.3.2. UVs and Baking
- 3.3.3. Texturing

3.4. Module 2: Walls
- 3.4.1. High to Low Modular Modeling
- 3.4.2. UVs and Baking
- 3.4.3. Texturing

3.5. Module 3: Roofs
- 3.5.1. High to Low Modular Modeling
- 3.5.2. Retopology, UVs, and Baking
- 3.5.3. Texturing

3.6. Module 4: Extras (Pipes, Railings, Etc.)
- 3.6.1. High to Low Modular Modeling
- 3.6.2. UVS and Baking
- 3.6.3. Texturing

3.7. Hero Asset 1: Mechanical Doors
- 3.7.1. High to Low Modular Modeling
- 3.7.2. Retopology, UVs, and Baking
- 3.7.3. Texturing

3.8. Hero Asset 2: Hibernation Chamber
- 3.8.1. High to Low Modular Modeling
- 3.8.2. Retopology, UVs, and Baking
- 3.8.3. Texturing

3.9. In Unity
- 3.9.1. Importing Textures
- 3.9.2. Application of Materials
- 3.9.3. Scene Lighting

3.10. End of Project
- 3.10.1. VR Visualization
- 3.10.2. Prefab and Export
- 3.10.3. Conclusions

You will have at your disposal all the material you need to improve and design the graphics of the next jewel of VR video games.

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.

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

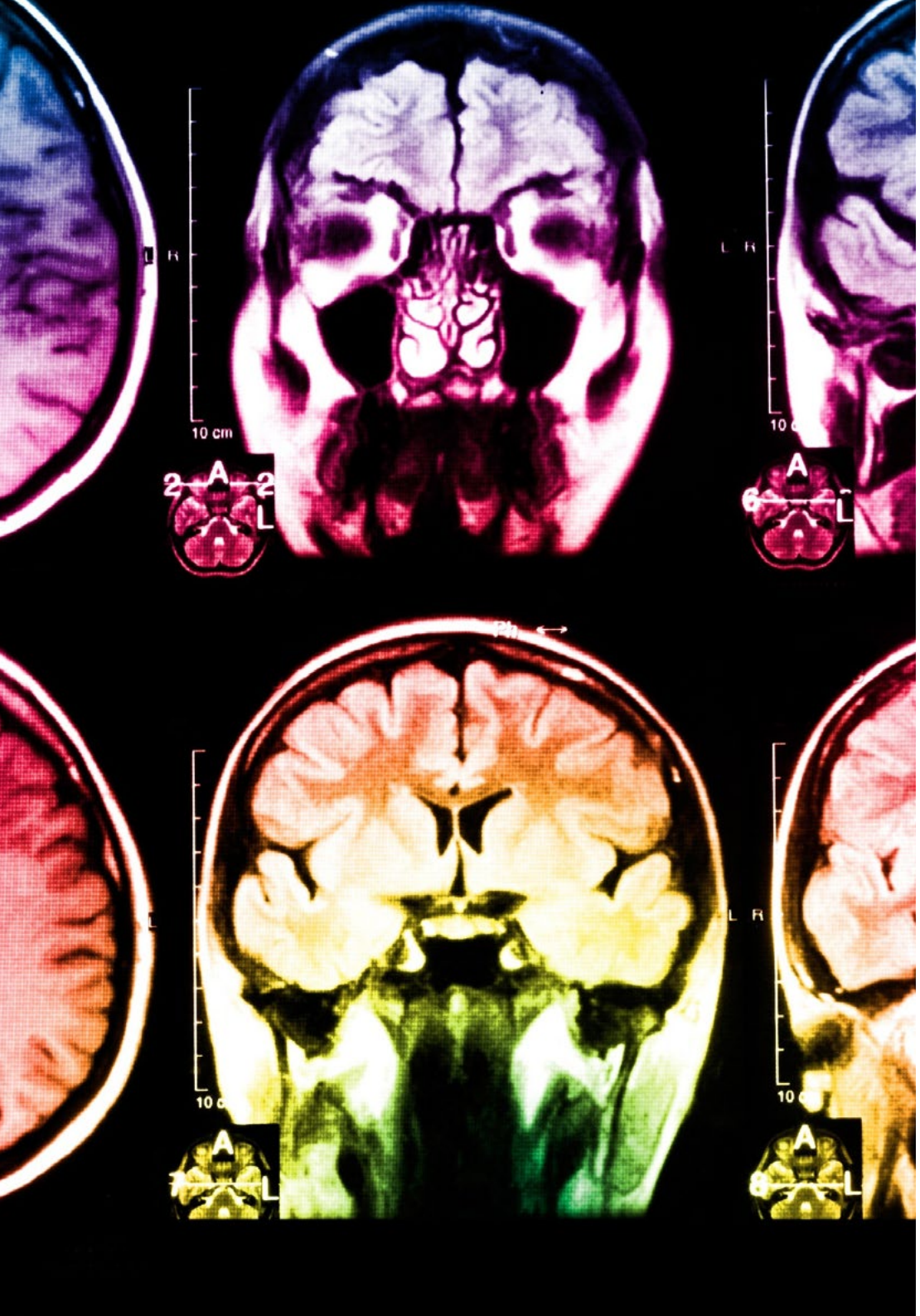
TECH effectively combines the Case Study methodology with a 100% online learning system based on repetition, which combines 8 different teaching elements in each lesson.

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.

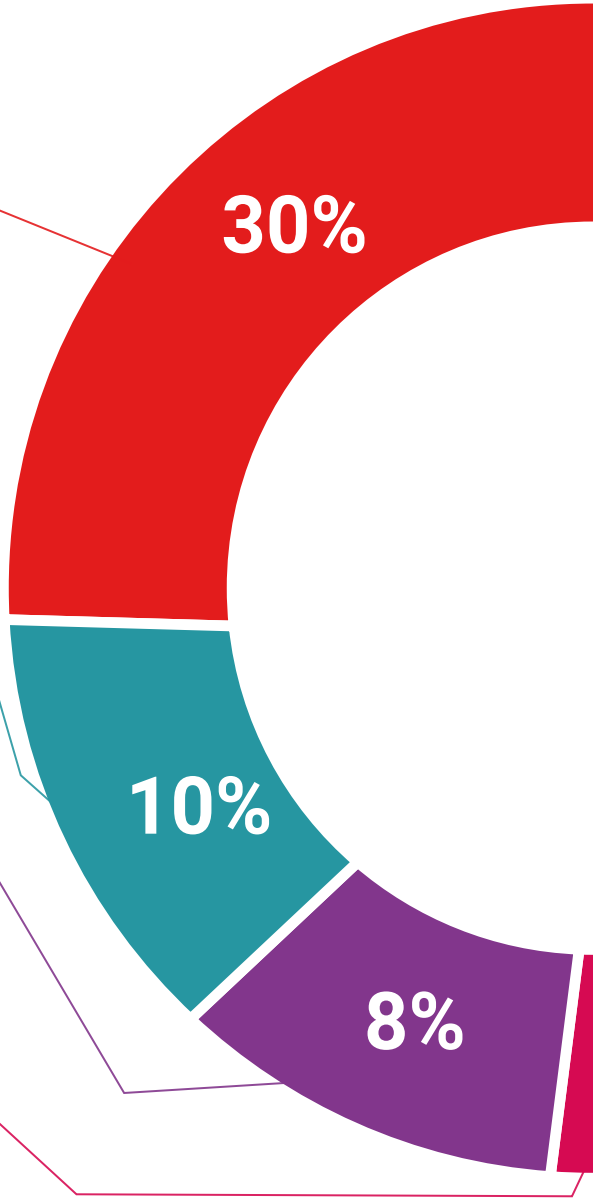
Learning from an Expert strengthens knowledge and memory, and generates confidence in future difficult decisions.

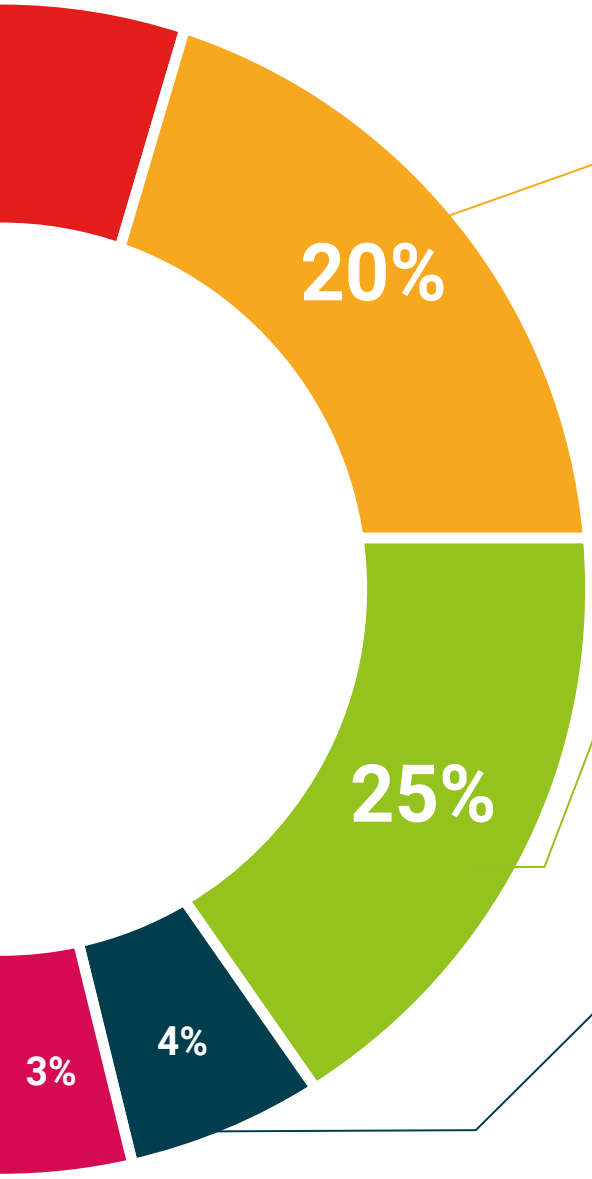
Practising Skills and Abilities

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.

06

Certificate

The Postgraduate Diploma in Baking, UVS, and Sci-Environments in Art for Virtual Reality 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 Baking, UVS, and Sci-Environments in Art for Virtual Reality** 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 Baking, UVS, and Sci-Environments in Art for Virtual Reality**

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 DIPLOMA

in

Baking, UVS, and Sci-Environments in Art for Virtual Reality

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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