

Master's Degree Art for Virtual Reality

Accreditation/Membership

A person is shown from the side, wearing a VR headset. They are looking into a virtual environment that features blue and white geometric shapes, possibly a futuristic city or abstract landscape. The background is a mix of blue and white, with some light effects.

tech global
university



Master's Degree Art for Virtual Reality

- » Modality: Online
- » Duration: 12 months.
- » Certificate: TECH Global University
- » Accreditation: 60 ECTS
- » Schedule: at your own pace
- » Exams: online

Website: www.techtitude.com/us/design/master-degree/master-art-virtual-reality

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01

Introduction to the Program

The implementation of Art in Virtual Reality has opened new pathways for innovation within digital design. Among its main advantages is its ability to generate immersive and emotionally impactful visual experiences. In this context, professionals need to master the most advanced techniques for creating immersive virtual spaces that enhance visual storytelling and maximize the aesthetic impact of the environment. To support this endeavor, TECH has developed an exclusive academic program focused on the use of this emerging technological tool within the artistic field. Furthermore, it is delivered in a flexible, fully online format that allows students to plan their schedules and study pace individually.



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A comprehensive and 100% online program, exclusive to TECH, with an international perspective supported by our membership with The Design Society"

Technological evolution has fostered new forms of artistic expression, with Virtual Reality standing out as one of the most innovative platforms for the development of digital art. In fact, a study conducted by the International Monetary Fund highlights that this technology has a global market value of more than 15 billion dollars, with projections indicating continued growth. This underscores the importance for Design professionals to acquire specialized skills in the use of Virtual Reality techniques to optimize artistic creation processes.

Within this framework, TECH has launched a groundbreaking program in Art for Virtual Reality. Designed by leading experts in the field, the academic pathway provides in-depth training in the use of cutting-edge software such as Unity, Blender, 3DS Max, and ZBrush. In the same vein, the syllabus explores the specific functionalities of graphics engines and their optimal application in immersive environments through scene configuration and lighting. The teaching materials will also provide the keys to developing a complete Sci-Fi environment, covering everything from modular planning and initial blackout to light baking. In this way, graduates will acquire the skills to design immersive virtual spaces with a high level of detail, aesthetic coherence, and functionality.

It is worth noting that this program is delivered entirely online, offering students a flexible modality that removes geographic and scheduling barriers. Learners will only need a device with an internet connection to access the Virtual Campus.

Thanks to TECH's membership with **The Design Society (DS)**, students will become part of a global community dedicated to design and its study. They will have access to open-access publications and be able to participate in collaborative events. Additionally, the membership supports the maintenance of the society and its platforms, facilitating interaction and access to specialized resources for professional development in design.

This **Master's Degree in Art for Virtual Reality** contains the most complete and up-to-date university program on the market. Its most notable features are:

- ♦ The development of case studies presented by experts in Art for Virtual Reality
- ♦ The graphic, schematic, and practical contents with which they are created, provide scientific and 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



You will understand the technical and aesthetic foundations necessary to develop high-quality, immersive, and functional digital experiences"

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You will implement complete digital production workflows in Virtual Reality, from concept to final visualization across a variety of devices”

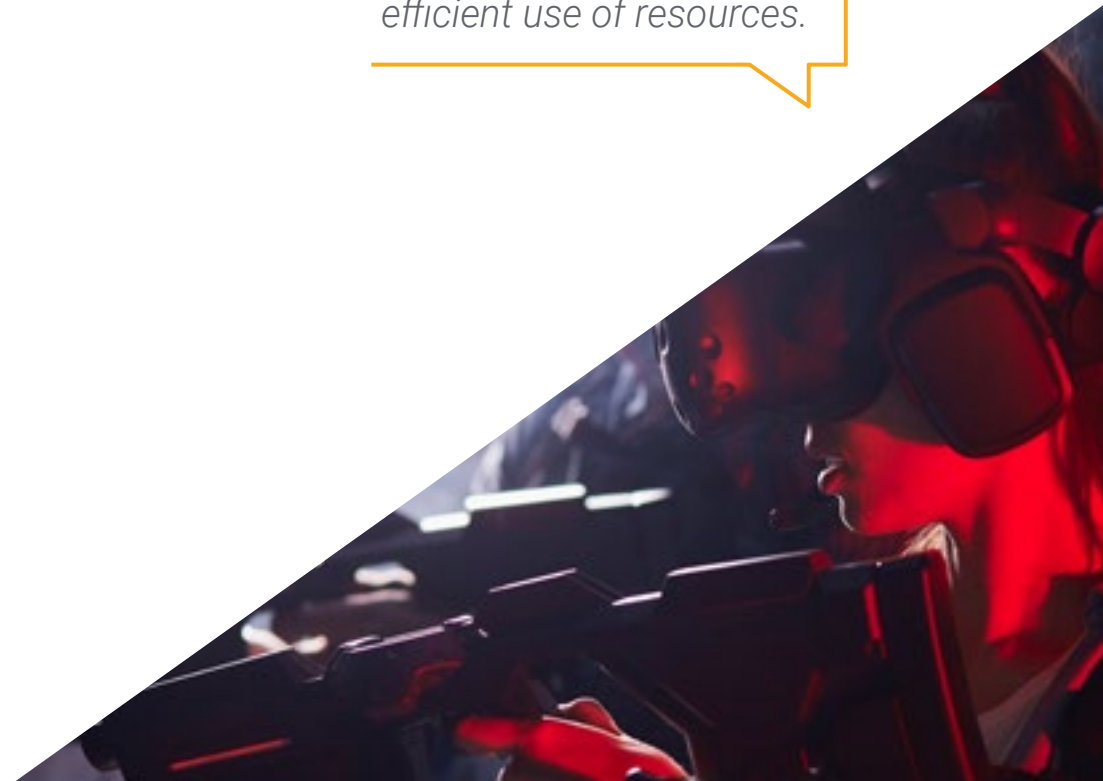
The teaching faculty includes professionals in the field of Art for Virtual Reality, who bring their professional expertise to this program, along with renowned specialists from leading organizations and prestigious universities.

The multimedia content, developed with the latest educational technology, will provide the professional with situated and contextual learning, i.e., a simulated environment that will provide an immersive learning experience designed to prepare for real-life situations.

This program is designed around Problem-Based Learning, whereby the student must try to solve the different professional practice situations that arise throughout the program. For this purpose, the professional will be assisted by an innovative interactive video system created by renowned and experienced experts.

You will delve into the latest trends in business management, being able to design effective strategies to make decisions in complex and unstable contexts.

You will apply procedural textures and materials with Substance Painter, ensuring efficient use of resources.



02

Why Study at TECH?

TECH is the world's largest online university. With an impressive catalog of more than 14,000 university programs, available in 11 languages, it is positioned as a leader in employability, with a 99% job placement rate. In addition, it has a huge faculty of more than 6,000 professors of the highest international prestige.



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Study at the largest online university in the world and ensure your professional success. The future begins at TECH”

The world's best online university, according to FORBES

The prestigious Forbes magazine, specialized in business and finance, has highlighted TECH as "the best online university in the world" This is what they have recently stated in an article in their digital edition in which they echo the success story of this institution, "thanks to the academic offer it provides, the selection of its teaching staff, and an innovative learning method oriented to form the professionals of the future".

The best top international faculty

TECH's faculty is made up of more than 6,000 professors of the highest international prestige. Professors, researchers and top executives of multinational companies, including Isaiah Covington, performance coach of the Boston Celtics; Magda Romanska, principal investigator at Harvard MetaLAB; Ignacio Wistumba, chairman of the department of translational molecular pathology at MD Anderson Cancer Center; and D.W. Pine, creative director of TIME magazine, among others.

The world's largest online university

TECH is the world's largest online university. We are the largest educational institution, with the best and widest digital educational catalog, one hundred percent online and covering most areas of knowledge. We offer the largest selection of our own degrees and accredited online undergraduate and postgraduate degrees. In total, more than 14,000 university programs, in ten different languages, making us the largest educational institution in the world.



The most complete syllabuses on the university scene

TECH offers the most complete syllabuses on the university scene, with programs that cover fundamental concepts and, at the same time, the main scientific advances in their specific scientific areas. In addition, these programs are continuously updated to guarantee students the academic vanguard and the most demanded professional skills. and the most in-demand professional competencies. In this way, the university's qualifications provide its graduates with a significant advantage to propel their careers to success.

A unique learning method

TECH is the first university to use Relearning in all its programs. This is the best online learning methodology, accredited with international teaching quality certifications, provided by prestigious educational agencies. In addition, this innovative academic model is complemented by the "Case Method", thereby configuring a unique online teaching strategy. Innovative teaching resources are also implemented, including detailed videos, infographics and interactive summaries.

The official online university of the NBA

TECH is the official online university of the NBA. Thanks to our agreement with the biggest league in basketball, we offer our students exclusive university programs, as well as a wide variety of educational resources focused on the business of the league and other areas of the sports industry. Each program is made up of a uniquely designed syllabus and features exceptional guest hosts: professionals with a distinguished sports background who will offer their expertise on the most relevant topics.

Leaders in employability

TECH has become the leading university in employability. Ninety-nine percent of its students obtain jobs in the academic field they have studied within one year of completing any of the university's programs. A similar number achieve immediate career enhancement. All this thanks to a study methodology that bases its effectiveness on the acquisition of practical skills, which are absolutely necessary for professional development.



Google Premier Partner

The American technology giant has awarded TECH the Google Premier Partner badge. This award, which is only available to 3% of the world's companies, highlights the efficient, flexible and tailored experience that this university provides to students. The recognition not only accredits the maximum rigor, performance and investment in TECH's digital infrastructures, but also places this university as one of the world's leading technology companies.



The top-rated university by its students

Students have positioned TECH as the world's top-rated university on the main review websites, with a highest rating of 4.9 out of 5, obtained from more than 1,000 reviews. These results consolidate TECH as the benchmark university institution at an international level, reflecting the excellence and positive impact of its educational model.



03 Syllabus

The teaching materials of this program have been designed by experts in Virtual Reality applied to Design. As a result, the syllabus delves into the use of advanced tools such as Unity, Blender, and Substance Painter. In addition, the program provides in-depth training in modeling, texturing, rigging, lighting, and baking techniques oriented toward immersive environments. Thanks to this approach, graduates will be able to manage all phases of a visual project, from modular planning and initial blockout to the implementation of Sci-Fi environments.



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*You will master the conceptual
and technical foundations of Art
applied to high-impact Virtual
Reality experiences”*

Module 1. The Project and the Unity Game Engine

- 1.1. Design
 - 1.1.1. Pureref
 - 1.1.2. Scaling
 - 1.1.3. Differences and Limitations
- 1.2. Project Planning
 - 1.2.1. Modular Planning
 - 1.2.2. *Blockout*
 - 1.2.3. Assembly
- 1.3. Visualization in Unity
 - 1.3.1. Setting up Unity for Oculus
 - 1.3.2. The Oculus App
 - 1.3.3. Collision and Camera Adjustments
- 1.4. Visualization in Unity: *Scene*
 - 1.4.1. Scene Configuration for VR
 - 1.4.2. Export of APKs
 - 1.4.3. Installing APKs on Oculus Quest 2
- 1.5. Materials in Unity
 - 1.5.1. Standard
 - 1.5.2. Unlit: Features of This Material and When to Use It
 - 1.5.3. Optimization
- 1.6. Textures in Unity
 - 1.6.1. Importing Textures
 - 1.6.2. Transparency
 - 1.6.3. *Sprite*
- 1.7. Lighting
 - 1.7.1. VR Lighting
 - 1.7.2. The Lighting Menu in Unity
 - 1.7.3. VR Skybox
- 1.8. Lighting: *Lightmapping*
 - 1.8.1. *Lightmapping Settings*
 - 1.8.2. Types of Lights
 - 1.8.3. Emissive

- 1.9. Lighting 3: Baking
 - 1.9.1. Baking
 - 1.9.2. *Ambient Occlusion*
 - 1.9.3. Optimization
- 1.10. Organizing and Exporting
 - 1.10.1. *Folders*
 - 1.10.2. Prefab
 - 1.10.3. Exporting and Importing Unity Packages

Module 2. Blender

- 2.1. Interface
 - 2.1.1. Software Blender
 - 2.1.2. Controls and Shortcuts
 - 2.1.3. Scenes and Customization
- 2.2. Modeling
 - 2.2.1. Tools
 - 2.2.2. Mesh
 - 2.2.3. Curves and Surfaces
- 2.3. Modifiers
 - 2.3.1. Modifiers
 - 2.3.2. How Are They Used
 - 2.3.3. Types of Modifiers
- 2.4. Hard Surface Modeling
 - 2.4.1. Prop Modeling
 - 2.4.2. Evolving Prop Modeling
 - 2.4.3. Final Prop Modeling
- 2.5. Materials
 - 2.5.1. Assignment and Components
 - 2.5.2. Creating Materials
 - 2.5.3. Creating Procedural Materials
- 2.6. Animation and Rigging
 - 2.6.1. *Keyframes*
 - 2.6.2. *Armatures*
 - 2.6.3. *Constraints*

- 2.7. Simulation
 - 2.7.1. Fluids
 - 2.7.2. Hair and Particles
 - 2.7.3. Clothes
- 2.8. Rendering
 - 2.8.1. Cycles and Eevee
 - 2.8.2. Lights
 - 2.8.3. Cameras
- 2.9. *Grease Pencil*
 - 2.9.1. Structure and Primitives
 - 2.9.2. Properties and Modifiers
 - 2.9.3. Examples
- 2.10. *Geometry Nodes*
 - 2.10.1. Attributes
 - 2.10.2. Types of Nodes
 - 2.10.3. Practical Example

Module 3. 3DS Max

- 3.1. Interface Set-up
 - 3.1.1. Project Start
 - 3.1.2. Automatic and Incremental Saving
 - 3.1.3. Units of Measurement
- 3.2. The Create Menu
 - 3.2.1. Objects
 - 3.2.2. Lights
 - 3.2.3. Cylindrical and Spherical Objects
- 3.3. The Modify Menu
 - 3.3.1. The Menu
 - 3.3.2. Button Configuration
 - 3.3.3. Uses
- 3.4. *Edit Poly: Polygons*
 - 3.4.1. *Edit Poly Mode*
 - 3.4.2. *Edit Polygons*
 - 3.4.3. *Edit Geometry*

- 3.5. Edit Poly: Selection
 - 3.5.1. *Selection*
 - 3.5.2. *Soft Selection*
 - 3.5.3. IDs and Smoothing Groups
- 3.6. The Hierarchy Menu
 - 3.6.1. Pivot Conditions
 - 3.6.2. Reset XFom and Freeze Transform
 - 3.6.3. Adjusting the Pivot Menu
- 3.7. Material Editor
 - 3.7.1. Compact Material Editor
 - 3.7.2. Slate Material Editor
 - 3.7.3. Multi/Sub-Object
- 3.8. *Modifier List*
 - 3.8.1. Modeling Modifiers
 - 3.8.2. Modeling Modifier Evolution
 - 3.8.3. Modeling Modifier Final Assessment
- 3.9. XView and Non-Quads
 - 3.9.1. XView
 - 3.9.2. Checking for Errors in Geometry
 - 3.9.3. *Non-Quads*
- 3.10. Exporting to Unity
 - 3.10.1. Triangulating the Asset
 - 3.10.2. DirectX or OpenGL for Normals
 - 3.10.3. Conclusions

Module 4. ZBrush

- 4.1. Zbrush
 - 4.1.1. Polymesh
 - 4.1.2. *Subtools*
 - 4.1.3. Gizmo 3D
- 4.2. Creating Meshes
 - 4.2.1. Quick Mesh and Primitives
 - 4.2.2. Mesh Extract
 - 4.2.3. Booleans

- 4.3. Sculpting
 - 4.3.1. Symmetry
 - 4.3.2. Main Brushes
 - 4.3.3. Dynamesh
- 4.4. Masks
 - 4.4.1. Brushes and the Mask Menu
 - 4.4.2. Brush Masks
 - 4.4.3. *Polygroups*
- 4.5. Sculpting Organic Prop K
 - 4.5.1. Sculpting Low Poly
 - 4.5.2. Low Poly Sculpting Evolution
 - 4.5.3. Low Poly Sculpting Final Assessment
- 4.6. IMM Brushes
 - 4.6.1. Controls
 - 4.6.2. Insert MultiMesh
 - 4.6.3. Creating IMM Brushes
- 4.7. Curve Brushes
 - 4.7.1. Controls
 - 4.7.2. Creating Curve Brushes
 - 4.7.3. IMM Curve Brushes
- 4.8. *High Poly*
 - 4.8.1. Subdivisions and Dynamic Subdivisions
 - 4.8.2. HD-geometry
 - 4.8.3. Projecting Noise
- 4.9. Other Types of Mesh
 - 4.9.1. MicroMesh
 - 4.9.2. NanoMesh
 - 4.9.3. *ArrayMesh*
- 4.10. High Poly Organic PropSculpting
 - 4.10.1. Prop Sculpting
 - 4.10.2. Prop Sculpting Evolution
 - 4.10.3. Prop Sculpting Final Assessment





Module 5. Retopology

- 5.1. Retopology in ZBrush-ZRemesher
 - 5.1.1. ZRemesher
 - 5.1.2. Guidelines
 - 5.1.3. Examples
- 5.2. Retopology in ZBrush-Decimation Master
 - 5.2.1. *Decimation Master*
 - 5.2.2. Combining It with Brushes
 - 5.2.3. *Workflow*
- 5.3. Retopology in ZBrush-ZModeler
 - 5.3.1. Zmodeler
 - 5.3.2. Modes
 - 5.3.3. Correcting Meshes
- 5.4. Prop Retopology
 - 5.4.1. Hard Surface Prop Retopology
 - 5.4.2. Organic Prop Retopology
 - 5.4.3. Hand Retopology
- 5.5. TopoGun
 - 5.5.1. Advantages of TopoGun
 - 5.5.2. The Interface
 - 5.5.3. Importing
- 5.6. *Tools: Edit*
 - 5.6.1. *Simple Edit Tool*
 - 5.6.2. *Simple Create Tool*
 - 5.6.3. *Draw Tool*
- 5.7. *Tools: Bridge*
 - 5.7.1. *Bridge Tool*
 - 5.7.2. *Brush Tool*
 - 5.7.3. *Extrude Tool*
- 5.8. *Tools: Tubes*
 - 5.8.1. *Tubes Tool*
 - 5.8.2. *Symmetry Set-Up*
 - 5.8.3. Feature Subdivision and Map Baking

- 5.9. Head Retopology
 - 5.9.1. Facial Loops
 - 5.9.2. Mesh Optimization
 - 5.9.3. Exporting
- 5.10. Full Body Retopology
 - 5.10.1. Body Loops
 - 5.10.2. Mesh Optimization
 - 5.10.3. VR Requirements

Module 6. UVs

- 6.1. Advanced UVS
 - 6.1.1. Warnings
 - 6.1.2. Cuts
 - 6.1.3. Texture Density
- 6.2. Creating UVS in ZBrush-UVMaster
 - 6.2.1. Controls
 - 6.2.2. Unwrap
 - 6.2.3. Unusual Topology
- 6.3. UVMaster: Painting
 - 6.3.1. Painting Control
 - 6.3.2. Creating Seams
 - 6.3.3. Checkseams
- 6.4. UVMaster: Packing
 - 6.4.1. UV Packing
 - 6.4.2. Creating Islands
 - 6.4.3. Flatten
- 6.5. UVMaster: Clones
 - 6.5.1. Working With Clones
 - 6.5.2. Polygroups
 - 6.5.3. Control Painting
- 6.6. Rizom UV
 - 6.6.1. Rizom Script
 - 6.6.2. The Interface
 - 6.6.3. Importing With or Without UVS

- 6.7. Seams and Cuts
 - 6.7.1. Keyboard Shortcuts
 - 6.7.2. 3D Panel
 - 6.7.3. UV Panel
- 6.8. UV Unwrap and Layout Panel
 - 6.8.1. Unfold
 - 6.8.2. Optimize
 - 6.8.3. Layout and Packing
- 6.9. UV: More Tools
 - 6.9.1. Align, Straighten, Flip, and Fit
 - 6.9.2. TopoCopy and Stack1
 - 6.9.3. Edge Loop Parameters
- 6.10. Advanced UV Rizom
 - 6.10.1. Auto Seams
 - 6.10.2. UVs Channels
 - 6.10.3. Texel Density

Module 7. Baking

- 7.1. Model Baking
 - 7.1.1. Preparing the Model for Baking
 - 7.1.2. Baking Principles
 - 7.1.3. Processing Options
- 7.2. Model Baking: Painter
 - 7.2.1. Baking in Painter
 - 7.2.2. Low Poly Baking
 - 7.2.3. High Poly Baking
- 7.3. Model Baking: Boxes
 - 7.3.1. Using Boxes
 - 7.3.2. Adjusting Distances
 - 7.3.3. Computing Tangent Space per Fragment
- 7.4. Map Baking
 - 7.4.1. Normal
 - 7.4.2. ID
 - 7.4.3. Ambient Occlusion

- 7.5. Map Baking: Curvatures
 - 7.5.1. Curvature
 - 7.5.2. Thickness
 - 7.5.3. Improving Map Quality
- 7.6. Baking in Marmoset
 - 7.6.1. Marmoset
 - 7.6.2. Functions
 - 7.6.3. Real-Time Baking
- 7.7. Setting Up the Document for Baking in Marmoset
 - 7.7.1. High Poly and Low Poly in 3DSMax
 - 7.7.2. Organizing the Scene in Marmoset
 - 7.7.3. Verifying That Everything Is Correct
- 7.8. Bake Project Panel
 - 7.8.1. Bake Group, High and Low
 - 7.8.2. The Geometry Menu
 - 7.8.3. Load
- 7.9. Advanced Options
 - 7.9.1. Output
 - 7.9.2. Adjusting the Cage
 - 7.9.3. Setting Up Maps
- 7.10. Baking
 - 7.10.1. Maps
 - 7.10.2. Result Preview
 - 7.10.3. Baking Floating Geometry

Module 8. Substance Painter

- 8.1. Project Creation
 - 8.1.1. Map Import
 - 8.1.2. UVs
 - 8.1.3. Baking
- 8.2. Layers
 - 8.2.1. Layer Types
 - 8.2.2. Layer Options
 - 8.2.3. Materials
- 8.3. Painting
 - 8.3.1. Brush Types
 - 8.3.2. Fill Projections
 - 8.3.3. Advance Dynamic Painting
- 8.4. Effects
 - 8.4.1. Fill
 - 8.4.2. Levels
 - 9.4.3. Anchor Points
- 8.5. Masks
 - 8.5.1. Alphas
 - 8.5.2. Procedurals and Grunges
 - 8.5.3. Hard Surfaces
- 8.6. Generators
 - 8.6.1. Generators
 - 8.6.2. Uses
 - 8.6.3. Examples
- 8.7. Filters
 - 8.7.1. Filters
 - 8.7.2. Uses
 - 8.7.3. Examples
- 8.8. Hard Surface Prop Texturing
 - 8.8.1. Prop Texturing
 - 8.8.2. Evolving Prop Texturing
 - 8.8.3. Final Prop Texturing
- 8.9. Organic Prop Texturing
 - 8.9.1. Prop Texturing
 - 8.9.2. Evolving Prop Texturing
 - 8.9.3. Final Prop Texturing
- 8.10. Render
 - 8.10.1. Iray
 - 8.10.2. Post-Processing
 - 8.10.3. Col Use

Module 9. Marmoset

- 9.1. The Alternative
 - 9.1.1. Import
 - 9.1.2. Interface
 - 9.1.3. Viewport
- 9.2. Classic
 - 9.2.1. Scene
 - 9.2.2. Tool Settings
 - 9.2.3. History
- 9.3. Inside the Scene
 - 9.3.1. Render
 - 9.3.2. Main Camera
 - 9.3.3. Sky
- 9.4. Lights
 - 9.4.1. Types
 - 9.4.2. Shadow Catcher
 - 9.4.3. Fog
- 9.5. Texture
 - 9.5.1. Texture Project
 - 9.5.2. Map Import
 - 9.5.3. Viewport
- 9.6. Layers: Paint
 - 9.6.1. Paint Layer
 - 9.6.2. Fill Layer
 - 9.6.3. Group
- 9.7. Layers: Adjustments
 - 9.7.1. Adjustment Layer
 - 9.7.2. Input Processor Layer
 - 9.7.3. Procedural Layer
- 9.8. Layers: Mask
 - 9.8.1. Mask
 - 9.8.2. Channels
 - 9.8.3. Maps



- 9.9. Materials
 - 9.9.1. Types of Material
 - 9.9.2. Settings
 - 9.9.3. Applying Them to the Scene
- 9.10. Dossier
 - 9.10.1. Marmoset Viewer
 - 9.10.2. Exporting Render Images
 - 9.10.3. Exporting Videos

Module 10. Sci-Fi Environment

- 10.1. Sci-Fi Concept and Planning
 - 10.1.1. References
 - 10.1.2. Planning
 - 10.1.3. Blockout
- 10.2. Implementation in Unity
 - 10.2.1. Importing Blockout and Verifying Scaling
 - 10.2.2. Skybox
 - 10.2.3. Files and Preliminary Materials
- 10.3. Module 1: Floors
 - 10.3.1. High-to-Low Modular Modeling
 - 10.3.2. UVs and Baking
 - 10.3.3. Texturing
- 10.4. Module 2: Walls
 - 10.4.1. High-to-Low Modular Modeling
 - 10.4.2. UVs and Baking
 - 10.4.3. Texturing
- 10.5. Module 3: Roofs
 - 10.5.1. High-to-Low Modular Modeling
 - 10.5.2. Retopology, UVs, and Baking
 - 10.5.3. Texturing
- 10.6. Module 4: Extras (Pipes, Railings, Etc.)
 - 10.6.1. High-to-Low Modular Modeling
 - 10.6.2. UVs and Baking
 - 10.6.3. Texturing

- 10.7. Hero Asset 1: Mechanical Doors
 - 10.7.1. High-to-Low Modular Modeling
 - 10.7.2. Retopology, UVs, and Baking
 - 10.7.3. Texturing
- 10.8. Hero Asset 2: Hibernation Chamber
 - 10.8.1. High-to-Low Modular Modeling
 - 10.8.2. Retopology, UVs, and Baking
 - 10.8.3. Texturing
- 10.9. In Unity
 - 10.9.1. Importing Textures
 - 10.9.2. Application of Materials
 - 10.9.3. Scene Lighting
- 10.10. End of Project
 - 10.10.1. VR Visualization
 - 10.10.2. Prefab and Export
 - 10.10.3. Conclusions



The interactive summaries of each module will allow you to consolidate concepts on texture optimization in Unity in a more dynamic way"

04

Teaching Objectives

This Master's Degree in Art for Virtual Reality equips designers with the skills necessary to create immersive environments of high visual impact. Through expert use of software such as Unity, students will learn to model, texture, and optimize three-dimensional scenarios adapted to multiple devices. They will also master advanced techniques in lighting, rigging, animation, and baking, all of which are essential to achieving professional results. Thanks to this, graduates will develop both technical and creative competencies to design innovative visual experiences within interactive digital environments.



“

You will correctly export projects and assets from different software programs into graphics engines”



General Objectives

- ♦ Master the key foundations of Design applied to Virtual Reality environments
- ♦ Train in the professional use of specialized software such as Unity, Blender, 3DS Max, ZBrush, and Substance Painter
- ♦ Develop advanced skills to create and optimize 3D assets for immersive environments
- ♦ Delve into the principles of modeling, texturing, lighting, and animation in Virtual Reality contexts
- ♦ Apply modern techniques of rigging, simulation, and baking to enhance both visual quality and performance in virtual environments
- ♦ Implement modular design methodologies for the planning and production of Sci-Fi spaces in Virtual Reality
- ♦ Export projects and assets correctly from different programs into graphics engines
- ♦ Foster a critical and ethical perspective on the impact of immersive digital art on users
- ♦ Strengthen the designer's creative and technical autonomy to lead Art for Virtual Reality projects



You will optimize every aspect of lighting in your Virtual Reality projects, achieving smooth real-time results"





Specific Objectives

Module 1. The Project and the Unity Graphics Engine

- ♦ Apply modular design and blockout principles in the planning of immersive environments
- ♦ Implement optimized interactive scenes in Unity, including lighting, materials, and textures for Virtual Reality

Module 2. Blender

- ♦ Master the Blender interface for modeling props and environments for virtual settings
- ♦ Execute particle, cloth, and fluid simulations within complex three-dimensional scenes
- ♦ Create and apply procedural materials adapted to rendering in Virtual Reality

Module 3. 3DS Max

- ♦ Acquire skills to model three-dimensional objects using advanced polygonal editing techniques
- ♦ Organize scenes with efficient hierarchies and materials compatible with graphics engines
- ♦ Prepare and export 3D assets optimally for integration into Unity

Module 4. ZBrush

- ♦ Sculpt high-resolution, detailed organic models for use in Virtual Reality
- ♦ Control the creation and manipulation of complex meshes using Dynamesh

Module 5. Retopology

- ♦ Perform manual and automated retopology processes to optimize sculpted meshes
- ♦ Prepare optimized assets for animation, texturing, and real-time rendering

Module 6. UVs

- ♦ Generate efficient UV maps to ensure accurate texture projection in immersive environments
- ♦ Apply texture density and alignment criteria according to the needs of Virtual Reality projects

Module 7. Baking

- ♦ Bake normal and curvature maps to transfer details between meshes
- ♦ Use tools such as Substance Painter to achieve greater precision
- ♦ Prepare models for real-time rendering in Virtual Reality platforms

Module 8. Substance Painter

- ♦ Create realistic and stylized materials through advanced procedural texturing techniques
- ♦ Apply masks, generators, and layers to develop surfaces with visual depth
- ♦ Optimize workflows for texturing assets destined for graphics engines such as Unity

Module 9. Marmoset

- ♦ Render three-dimensional models with professionally configured lighting and materials
- ♦ Adjust shaders, cameras, and lights according to the conditions of the Virtual environment

Module 10. Sci-Fi Environment

- ♦ Design complete Sci-Fi environments using modular techniques and hero assets
- ♦ Adjust materials, lighting, and spatial composition to achieve a high-impact immersive experience

05 Career Opportunities

This TECH program represents a unique opportunity for graphic designers and digital artists who wish to take the leap into the Virtual Reality sector. Through a practical and up-to-date approach, students will master tools such as Unity, Blender, and ZBrush to optimize the artistic development of virtual environments. In this way, they will be able to apply advanced modeling, texturing, and lighting techniques that enhance visual expressiveness in highly immersive interactive experiences.



“

Do you want to implement visual assets in cutting-edge graphics engines such as Unity? With this academic pathway, you can achieve it in just 12 months.

Graduate Profile

Graduates of this Master's Degree at TECH will be highly qualified professionals capable of designing and developing digital art for Virtual Reality environments. With a solid foundation in rendering, modeling, texturing, and lighting, they will be able to manage projects from conceptualization through to final implementation. They will also be proficient in handling end-to-end workflows, managing 3D environments, and optimizing resources in graphics engines such as Unity. In addition, they will know how to apply advanced techniques to present professional projects, solve technical problems, and lead creative proposals with a focus aligned to the technology sector.

You will optimize every stage of the creative process in Virtual Reality projects, from modeling and texturing to final export.

- ♦ **Technological Adaptation in Digital Environments:** Ability to integrate 3D design tools and state-of-the-art software into Virtual Reality workflows, optimizing each phase of visual development in interactive environments.
- ♦ **Technical and Creative Problem-Solving:** Capacity to identify common challenges in the production of art for VR and apply functional solutions that improve both visual quality and real-time performance.
- ♦ **Ethical Commitment and Professional Management of Digital Content:** Responsibility in the creation and handling of graphic assets, respecting principles of intellectual property, copyright, and best practices in digital production.
- ♦ **Interdisciplinary Collaboration:** Ability to work effectively with programmers, developers, game designers, and other technical profiles, achieving full cohesion in Virtual Reality projects





After completing this university program, you will be able to apply your knowledge and skills in the following positions:

- 1. Consultant in Workflows for Art in Virtual Reality:** Specialist who optimizes every stage of the creative process in Virtual Reality projects, from modeling and texturing to rendering and final export.
- 2. Graphic Production Project Manager:** Responsible for planning, coordinating, and monitoring human and material resources in the artistic development of interactive virtual environments.
- 3. Visual Support Technician for Immersive Experiences:** Expert in resolving issues related to textures, shaders, and optimization of 3D scenes for proper visualization in Virtual Reality headsets.
- 4. Advisor in Visual Accessibility for Virtual Reality Projects:** In charge of ensuring that artistic design meets criteria of visual accessibility, readability, and inclusive experience within immersive environments.

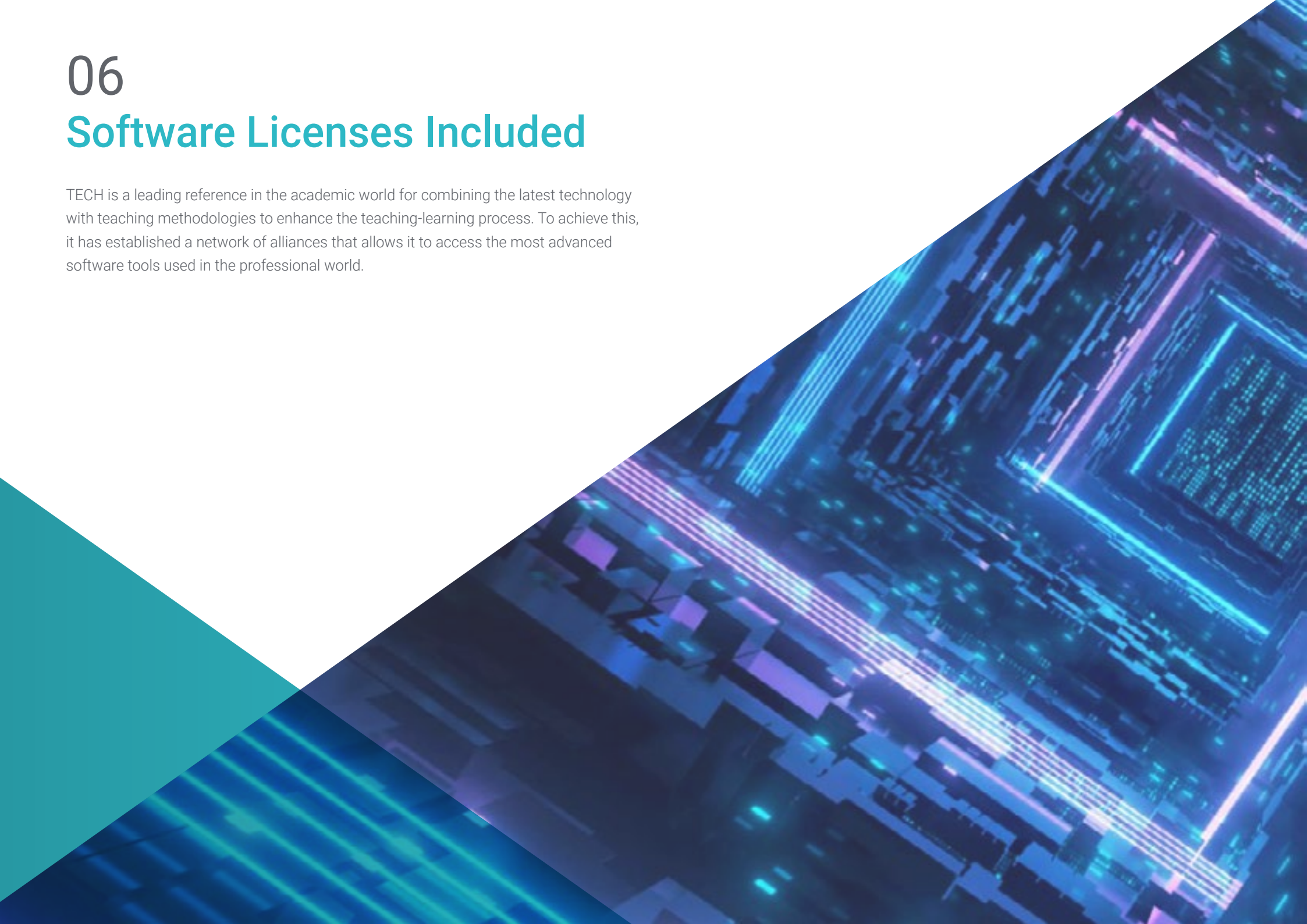
“

You will efficiently manage libraries of materials, textures, and models within collaborative platforms for Art teams in Virtual Reality projects”

06

Software Licenses Included

TECH is a leading reference in the academic world for combining the latest technology with teaching methodologies to enhance the teaching-learning process. To achieve this, it has established a network of alliances that allows it to access the most advanced software tools used in the professional world.



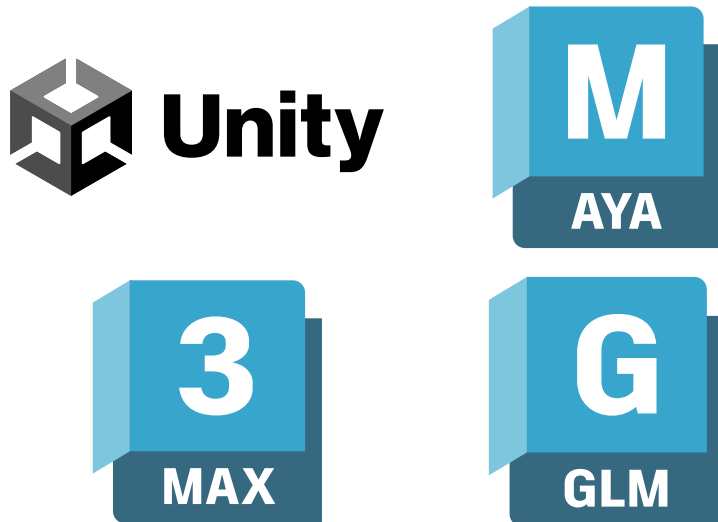
“

Upon enrolling, you will receive, completely free of charge, academic credentials for the following professional software applications”

TECH has established a network of professional alliances with the leading providers of software applied to various professional fields. These alliances allow TECH to access hundreds of software applications and licenses, making them available to its students.

The academic software licenses will allow students to use the most advanced applications in their professional field, so they can become familiar with them and master their use without incurring additional costs. TECH will manage the process of acquiring the licenses so that students can use the software without limitations for the entire duration of the Master's Degree in Art for Virtual Reality. Moreover, they will be able to do so completely free of charge.

TECH will provide free access to the following software applications:



Unity

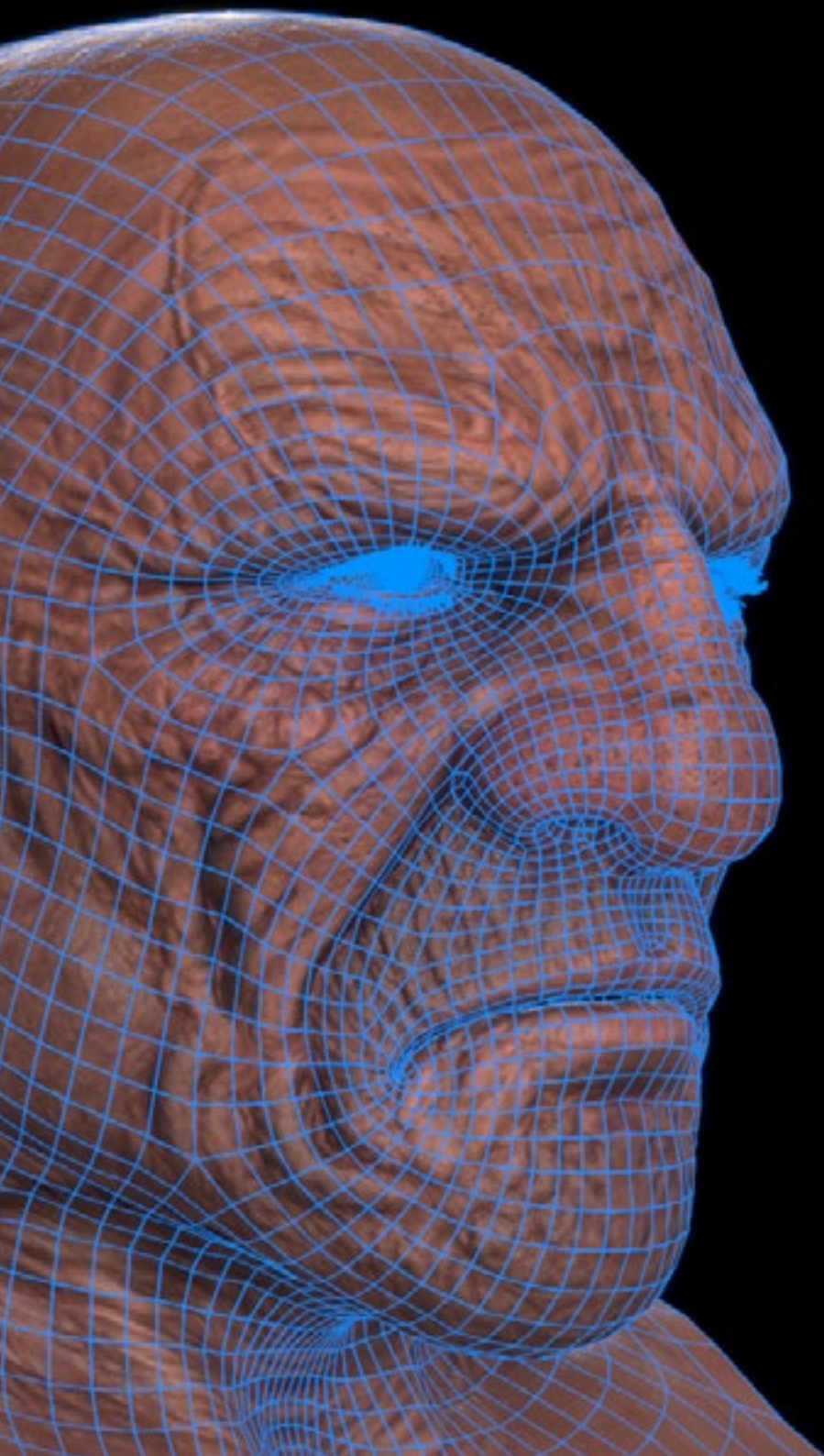
Unity is a leading development platform for creating interactive and multimedia experiences in both 2D and 3D. Throughout this academic program, students will have **free access** to the platform—valued at approximately **2,040 dollars**—enabling them to work with a professional solution **at no additional cost**.

This tool provides a real-time engine that supports high-quality rendered graphics, along with powerful scripting tools that allow for advanced customization. **Unity** includes a built-in physics system for realistic simulations, multi-platform support for mobile devices, consoles, and VR/AR technologies, as well as an extensive Asset Store with resources that accelerate development.

3ds MAX

During the course of the program, TECH provides graduates with the official **3ds Max** license, valued at **2,300 euros, at no additional cost**. This tool stands out in areas such as architectural design, digital animation, and visual simulation, enabling users to work with industry-leading professional technology.

This platform offers a robust environment for modeling, animating, and rendering complex projects with precision and efficiency. Thanks to its flexible architecture, users can develop anything from static visualizations to complete animation scenes, employing advanced functions in an optimized space designed for high-level results.



Maya

During this academic program, graduates will have **free access to Maya**, a powerful professional tool valued at **2,250 euros**. It is widely used in the audiovisual industry for developing 3D animations, modeling, simulation, and rendering, being essential in high-level film, television, and video game production.

This platform allows the creation of highly detailed environments and characters, management of complex visual effects, and execution of advanced animation processes. Its inclusion in this program strengthens technical capabilities in real-world contexts, enhancing employability with resources used by leading international studios in digital content creation.

Golaem

Golaem is specialized software for digital crowd simulation, widely used in film, video games, and television. This tool, with a commercial cost of **2,800 dollars**, will be available **for free** during the academic program, providing full access to its creative and technical potential.

This platform stands out for its ability to automate complex behaviors, manage thousands of characters, and facilitate precise animations within Autodesk Maya. Additionally, its modular system allows for customizing interactions, integrating scripts, and speeding up processes through distributed rendering, reducing time without sacrificing quality.

07

Study Methodology

TECH is the world's first university to combine the **case study** methodology with **Relearning**, a 100% online learning system based on guided repetition.

This disruptive pedagogical strategy has been conceived to offer professionals the opportunity to update their knowledge and develop their skills in an intensive and rigorous way. A learning model that places students at the center of the educational process giving them the leading role, adapting to their needs and leaving aside more conventional methodologies.



“

TECH will prepare you to face new challenges in uncertain environments and achieve success in your career”

The student: the priority of all TECH programs

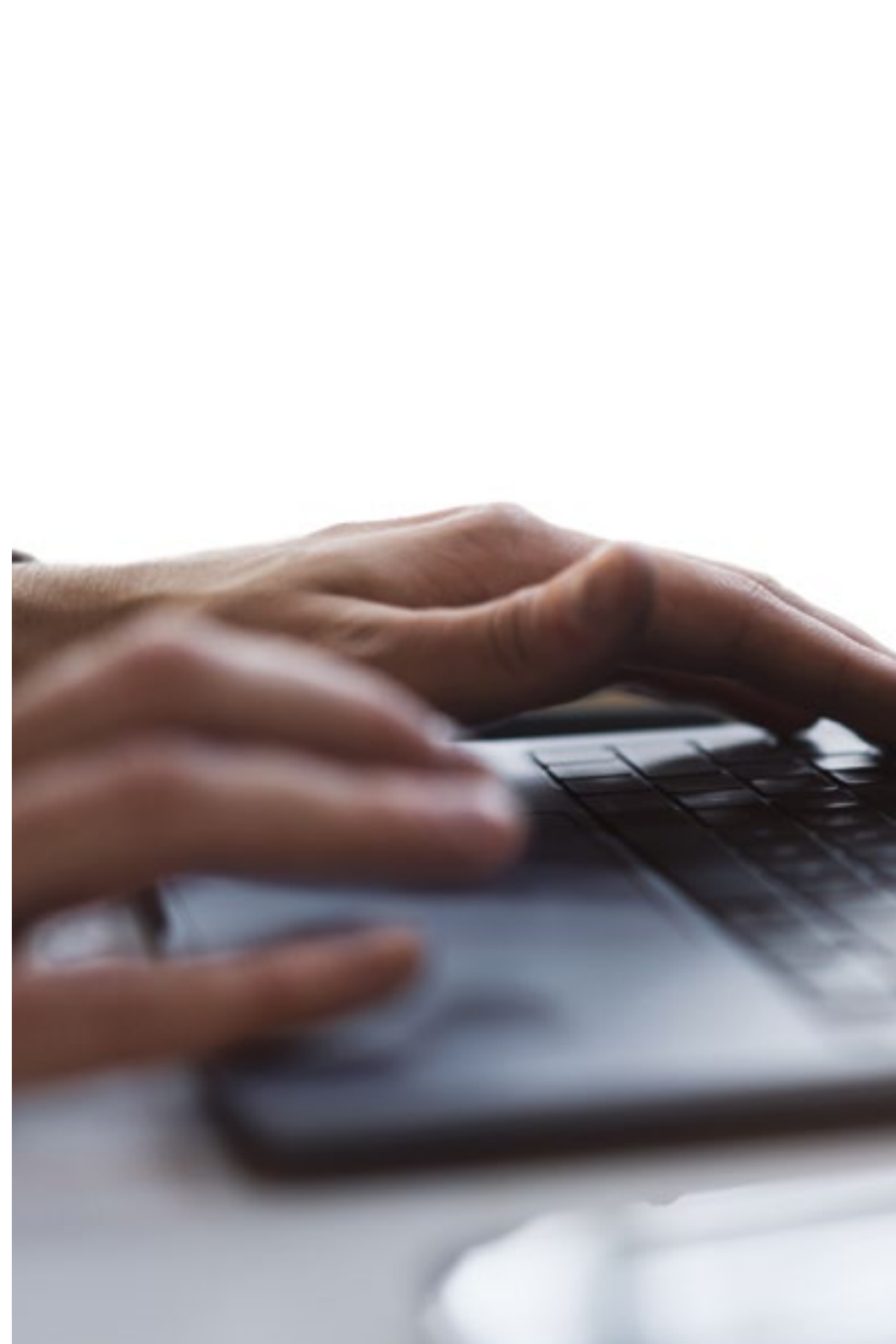
In TECH's study methodology, the student is the main protagonist.

The teaching tools of each program have been selected taking into account the demands of time, availability and academic rigor that, today, not only students demand but also the most competitive positions in the market.

With TECH's asynchronous educational model, it is students who choose the time they dedicate to study, how they decide to establish their routines, and all this from the comfort of the electronic device of their choice. The student will not have to participate in live classes, which in many cases they will not be able to attend. The learning activities will be done when it is convenient for them. They can always decide when and from where they want to study.

“

*At TECH you will NOT have live classes
(which you might not be able to attend)”*



The most comprehensive study plans at the international level

TECH is distinguished by offering the most complete academic itineraries on the university scene. This comprehensiveness is achieved through the creation of syllabi that not only cover the essential knowledge, but also the most recent innovations in each area.

By being constantly up to date, these programs allow students to keep up with market changes and acquire the skills most valued by employers. In this way, those who complete their studies at TECH receive a comprehensive education that provides them with a notable competitive advantage to further their careers.

And what's more, they will be able to do so from any device, pc, tablet or smartphone.

“*TECH's model is asynchronous, so it allows you to study with your pc, tablet or your smartphone wherever you want, whenever you want and for as long as you want*”

Case Studies and Case Method

The case method has been the learning system most used by the world's best business schools. Developed in 1912 so that law students would not only learn the law based on theoretical content, its function was also to present them with real complex situations. In this way, they could make informed decisions and value judgments about how to resolve them. In 1924, Harvard adopted it as a standard teaching method.

With this teaching model, it is students themselves who build their professional competence through strategies such as Learning by Doing or Design Thinking, used by other renowned institutions such as Yale or Stanford.

This action-oriented method will be applied throughout the entire academic itinerary that the student undertakes with TECH. Students will be confronted with multiple real-life situations and will have to integrate knowledge, research, discuss and defend their ideas and decisions. All this with the premise of answering the question of how they would act when facing specific events of complexity in their daily work.



Relearning Methodology

At TECH, case studies are enhanced with the best 100% online teaching method: Relearning.

This method breaks with traditional teaching techniques to put the student at the center of the equation, providing the best content in different formats. In this way, it manages to review and reiterate the key concepts of each subject and learn to apply them in a real context.

In the same line, and according to multiple scientific researches, reiteration is the best way to learn. For this reason, TECH offers between 8 and 16 repetitions of each key concept within the same lesson, presented in a different way, with the objective of ensuring that the knowledge is completely consolidated during the study process.

Relearning will allow you to learn with less effort and better performance, involving you more in your specialization, developing a critical mindset, defending arguments, and contrasting opinions: a direct equation to success.



A 100% online Virtual Campus with the best teaching resources

In order to apply its methodology effectively, TECH focuses on providing graduates with teaching materials in different formats: texts, interactive videos, illustrations and knowledge maps, among others. All of them are designed by qualified teachers who focus their work on combining real cases with the resolution of complex situations through simulation, the study of contexts applied to each professional career and learning based on repetition, through audios, presentations, animations, images, etc.

The latest scientific evidence in the field of Neuroscience points to the importance of taking into account the place and context where the content is accessed before starting a new learning process. Being able to adjust these variables in a personalized way helps people to remember and store knowledge in the hippocampus to retain it in the long term. This is a model called Neurocognitive context-dependent e-learning that is consciously applied in this university qualification.

In order to facilitate tutor-student contact as much as possible, you will have a wide range of communication possibilities, both in real time and delayed (internal messaging, telephone answering service, email contact with the technical secretary, chat and videoconferences).

Likewise, this very complete Virtual Campus will allow TECH students to organize their study schedules according to their personal availability or work obligations. In this way, they will have global control of the academic content and teaching tools, based on their fast-paced professional update.



The online study mode of this program will allow you to organize your time and learning pace, adapting it to your schedule”

The effectiveness of the method is justified by four fundamental achievements:

1. Students who follow this method not only achieve the assimilation of concepts, but also a development of their mental capacity, through exercises that assess real situations and the application of knowledge.
2. Learning is solidly translated into practical skills that allow the student to better integrate into the real world.
3. Ideas and concepts are understood more efficiently, given that the example situations are based on real-life.
4. Students like to feel that the effort they put into their studies is worthwhile. This then translates into a greater interest in learning and more time dedicated to working on the course.

The university methodology top-rated by its students

The results of this innovative teaching model can be seen in the overall satisfaction levels of TECH graduates.

The students' assessment of the teaching quality, the quality of the materials, the structure of the program and its objectives is excellent. Not surprisingly, the institution became the top-rated university by its students according to the global score index, obtaining a 4.9 out of 5.

Access the study contents from any device with an Internet connection (computer, tablet, smartphone) thanks to the fact that TECH is at the forefront of technology and teaching.

You will be able to learn with the advantages that come with having access to simulated learning environments and the learning by observation approach, that is, Learning from an expert.



As such, the best educational materials, thoroughly prepared, will be available in this program:



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.

This content is then adapted in an audiovisual format that will create our way of working online, with the latest techniques that allow us to offer you high quality in all of the material that we provide you with.



Practicing Skills and Abilities

You will carry out activities to develop specific competencies and skills in each thematic field. Exercises and activities to acquire and develop the skills and abilities that a specialist needs to develop within the framework of the globalization we live in.



Interactive Summaries

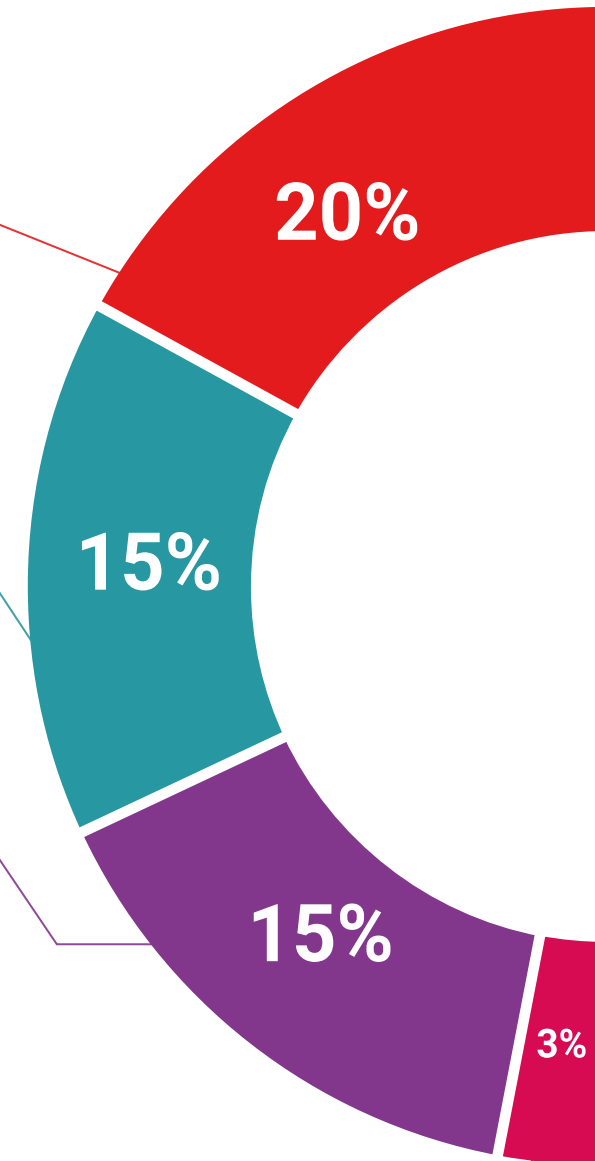
We present the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

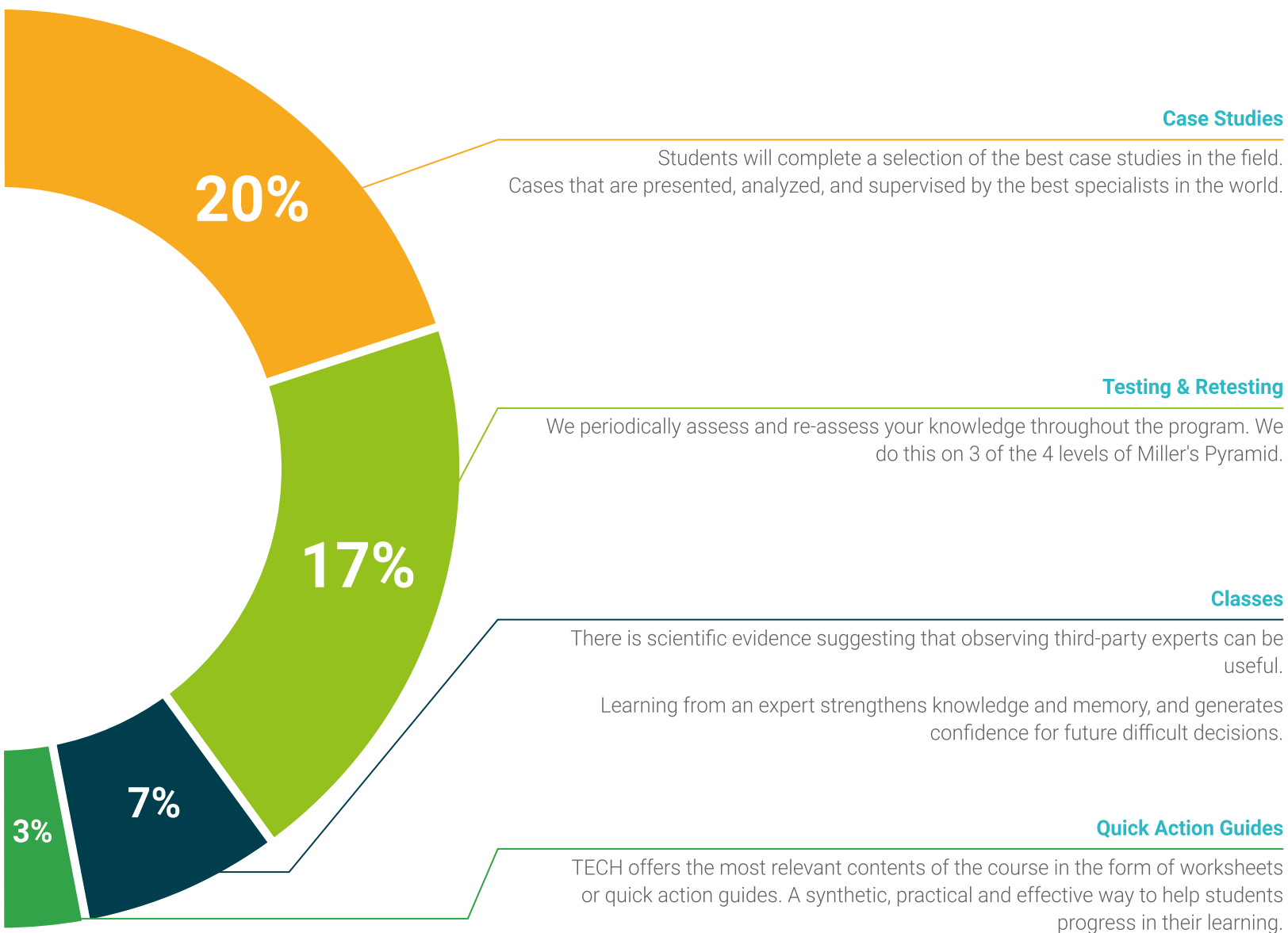
This exclusive educational system for presenting multimedia content was awarded by Microsoft as a "European Success Story".



Additional Reading

Recent articles, consensus documents, international guides... In our virtual library you will have access to everything you need to complete your education.





08

Teaching Staff

The teaching faculty of this Master's Degree has been carefully selected by TECH to provide students with an education of exceptional quality, accessible to anyone. With this in mind, the faculty has been composed of highly specialized experts in Art for Virtual Reality. These professionals bring extensive experience, having contributed to the success of complex immersive projects with high technical and visual impact across various sectors. In this way, graduates will embark on an immersive academic experience that will allow them to make a significant leap in quality in their professional careers.



“

*You will benefit from
personalized guidance from
the teaching team, made up
of renowned experts in Art for
Virtual Reality”*

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 Voxel School University Center for Digital Arts.
- ♦ Master's Degree in Art and Design for Video Games by U-Tad University Center for Technology and Digital Art

Teachers

Mr. Márquez Maceiras, Mario

- ♦ Audiovisual Operator at 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 U-Tad University Center for Technology and Digital Art

Mr. Morro, Pablo

- ♦ 3D Artist Specialized in Modeling, VFX, and Textures
- ♦ 3D Artist at Mind Trips
- ♦ Graduate in Video Game Creation and Design from Universitat Jaume I



09 Certificate

The Master's Degree in Art for Virtual Reality guarantees students, in addition to the most rigorous and up-to-date education, access to a diploma for the Master's Degree 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 private qualification will allow you to obtain a **Master's Degree in Art for Virtual Reality** endorsed by **TECH Global University**, the world's largest online university.

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

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

TECH is a member of **The Design Society (DS)**, the largest community of leading experts in design science. This membership strengthens its presence in international networks dedicated to the theoretical and practical evolution of design.

Accreditation/Membership

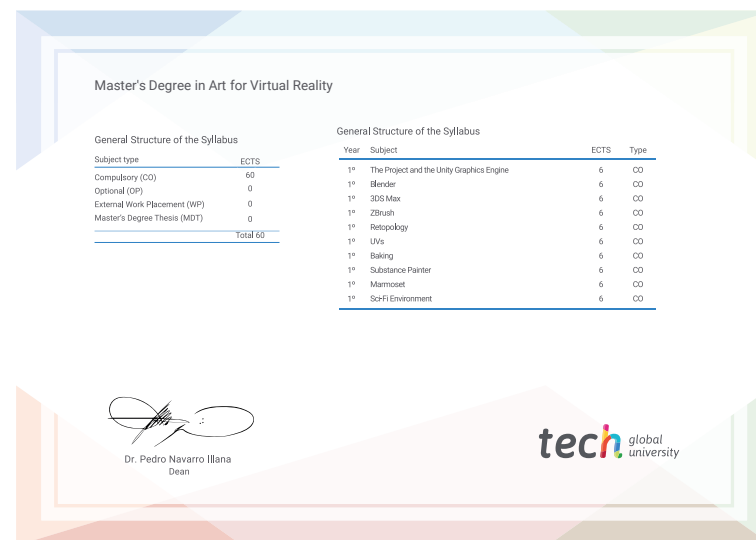


Title: **Master's Degree in Art for Virtual Reality**

Modality: **online**

Duration: **12 months.**

Accreditation: **60 ECTS**



future
health confidence people
education information tutors
guarantee accreditation teaching
institutions technology learning
community commitment
personalized service innovation
knowledge present quality
development language
virtual classroom



Master's Degree Art for Virtual Reality

- » Modality: Online
- » Duration: 12 months.
- » Certificate: TECH Global University
- » Accreditation: 60 ECTS
- » Schedule: at your own pace
- » Exams: online

Master's Degree Art for Virtual Reality

Accreditation/Membership

A woman with long brown hair is wearing a black VR headset and holding two black VR controllers. She is wearing a white long-sleeved shirt and has her mouth open in an expression of excitement or surprise. The background is dark with some blue and red lighting, suggesting a virtual environment. The image is partially obscured by a white diagonal line that runs from the top right to the bottom left.

tech global
university