Hybrid Professional Master's Degree

Video Games

tech global university

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Hybrid Professional Master's Degree

Video Games

Modality: **Hybrid (Online + Internship)**

Duration: **12 months**

Certificate: **TECH Global University**

60 + 5 ECTS Credits

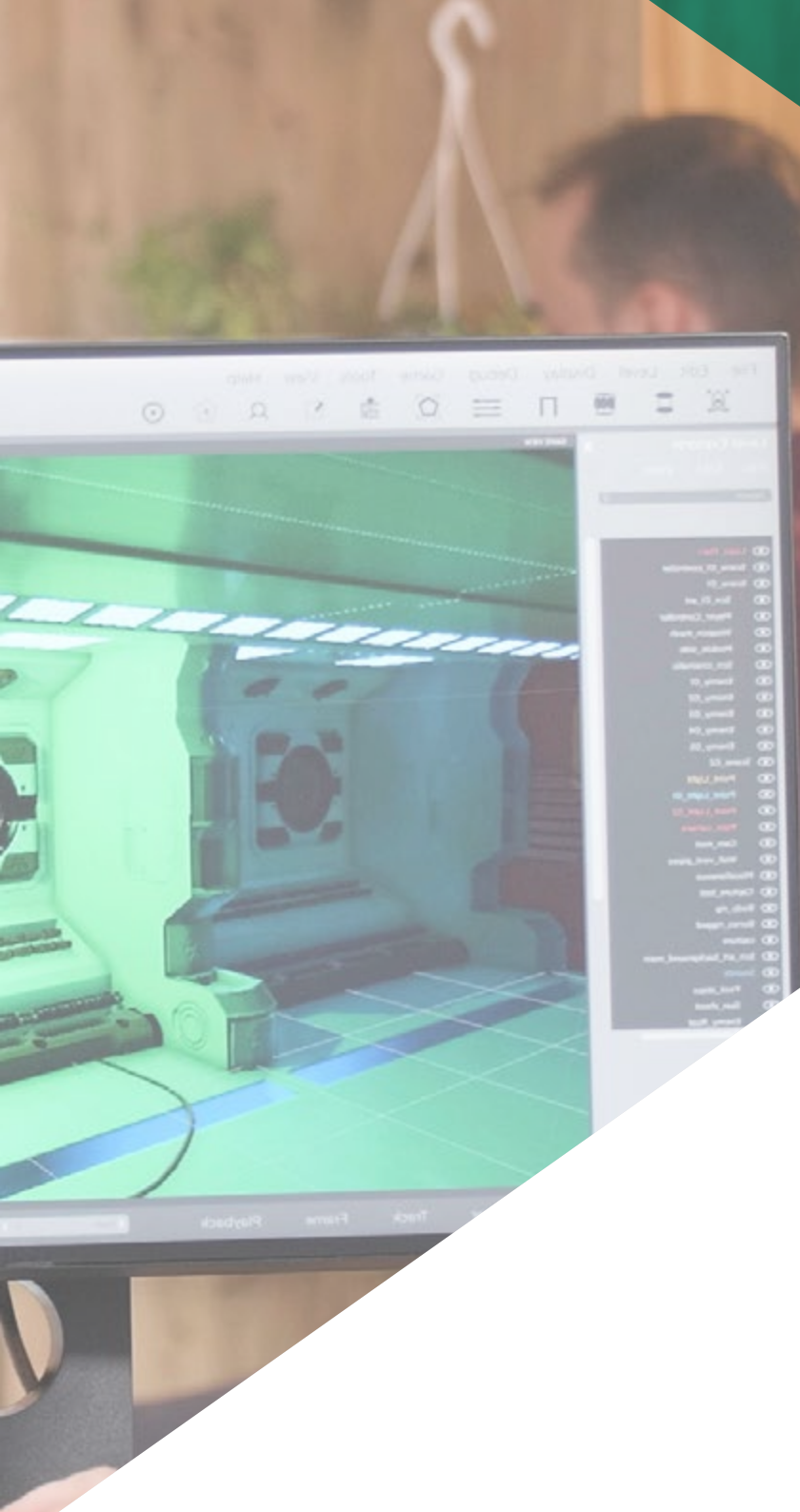
Website: www.techtitute.com/us/design/hybrid-professional-master-degree/hybrid-professional-master-degree-video-games

Index

01

Introduction

Video games are a popular form of entertainment that provides users with a unique and exciting interactive experience. A good design can make gamers feel completely immersed in an online world, gaining a sense of accomplishment and satisfaction by completing objectives and challenges within the title. For this reason, specialists in each of the phases of its development are highly required by companies to carry out first class projects. As a result, TECH has created this program that, through a combination of online theoretical teaching and a practical phase of 120 hours, will allow the student to delve into the design of creativities for video games. In this way, you will increase your career prospects in the industry.



Master, through this program, the best techniques to generate scripts and storylines for video games that are completely attractive to the gamer"

The video game industry is one of the largest and fastest growing industries in recent years. Thus, designers and developers are a key part of this field, since they are responsible for creating titles that are attractive to users, either for their careful scripting or for their excellent graphic quality. The success of a work in the market depends on these elements, as well as its durability over time. For this reason, experts in this field are increasingly required by companies involved in the creation of video games.

For this reason, TECH has decided to design this Hybrid Professional Master's Degree, which will provide students with the most advanced knowledge and skills in this sought-after field. During 1,500 hours of intensive teaching, the student will be able to delve into the elaboration of the Design Document, the creation of the narrative structure or the techniques to provide a high visual quality to the work. It will also delve into areas such as advanced programming, sound and music composition, and video game production and management.

All this, following a convenient 100% online methodology, which will enable students to perfectly combine their learning with their personal tasks and professional obligations. Likewise, you will have at your disposal very complete didactic materials elaborated by the best specialists in the field of design and development of Video Games, so that the knowledge acquired will be fully applicable in the workplace.

After completing the theoretical phase, you will have a practical stage in which you will transfer all the concepts you have assimilated to the real work environment, working for 3 weeks in a leading company in the technological field. In this way, you will boost the development of your professional skills, becoming a specialist highly valued by companies in the Video Game industry.

This **Hybrid Professional Master's Degree in Video Games** contains the most complete and up-to-date program on the market. The most important features include:

- Development of more than 100 case studies presented by specialists in the design and development of video games
- Their graphic, schematic and practical contents provide essential information on those disciplines that are indispensable for professional practice
- Elaboration of professional Video Game Design Documents
- Mastery of programming and animation techniques that enable the development of realistic movements
- Management of the strategies to design the sound and music of Video Games
- All of this will be complemented by 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
- Furthermore, you will be able to carry out a internship in one of the best Companies

Specialize in the design and development and development of Videogames with the best specialists in the field"

Take a program with a 100% online theoretical phase that will allow you to combine your studies with your personal and professional obligations"

In this Professional Master's Degree proposal, of professionalizing character and blended learning modality, the program is aimed at the specialization of professionals who want to develop their career in the area of Video Game design and development. The contents are based on the latest scientific evidence, and oriented in a didactic way to integrate theoretical knowledge into daily practice, and the theoretical-practical elements will facilitate the acquisition of knowledge.

Thanks to its multimedia content elaborated with the latest educational technology, they will allow the Video Game professional a situated and contextual learning, that is to say, a simulated environment that will provide an immersive learning programmed to train in real situations. This program is designed around Problem-Based Learning, whereby the professional must try to solve the different professional practice situations that arise throughout the program. For this purpose, the students will be assisted by an innovative interactive video system created by renowned and experienced experts.

After completing this program, you will increase your chances of being part of the development of prestigious video games from companies such as Ubisoft or Rockstar Games.

Become an expert in all the branches involved in the design and development of Video Games through this Hybrid Professional Master's Degree.

02

Why Study this Hybrid Professional Master's Degree?

In many professional areas, theoretical knowledge alone is not sufficient to achieve significant advances. In the field of video game design, it is equally relevant to have the practical skills necessary to apply the best scripting, art, programming or music creation techniques. To meet this need, TECH has designed a Hybrid Professional Master's Degree in Video Games, which offers a top-quality theoretical education along with the opportunity to gain practical experience working in a company specialized in the development of technological projects.

TECH offers you the unique opportunity to enrich an exquisite theoretical learning experience with an internship"

1. Updating from the Latest Technology Available

The world of videogames has undergone a notorious evolution over the last few years, due to the demands of the public and the development of new artistic, script or program techniques that make possible the development of first class works. For this reason, TECH has created this program, with the intention of allowing students to learn about and include all these advances in their daily practice.

2. Gaining In-depth Knowledge from the Experience of Top Specialists

This program has a highly qualified teaching staff that offers support and guidance to students throughout the theoretical period. Throughout the practical phase, students will have the opportunity to integrate into an exceptional work team and collaborate with experts in the field of video game design and development, acquiring the most relevant and outstanding skills in this area.

3. Entering first-class Communication Management environments

TECH carries out a rigorous selection of the centers where the internships of this Hybrid Professional Master's Degree are carried out, ensuring that students have access to top-level companies. Thanks to this, students can be part of outstanding work teams, where they can learn from the experience of highly trained experts in the development of Video Games.

4. Combining the Best Theory with State-of-the-Art Practice

In the pedagogical field, it is common to find programs that do not adequately meet the needs of professionals, requiring long teaching hours that are difficult to reconcile with personal and work life. In order to effectively address this problem, TECH has created an innovative learning model, which combines high quality theoretical teaching with internships in prestigious work environments.

5. Expanding the Boundaries of Knowledge

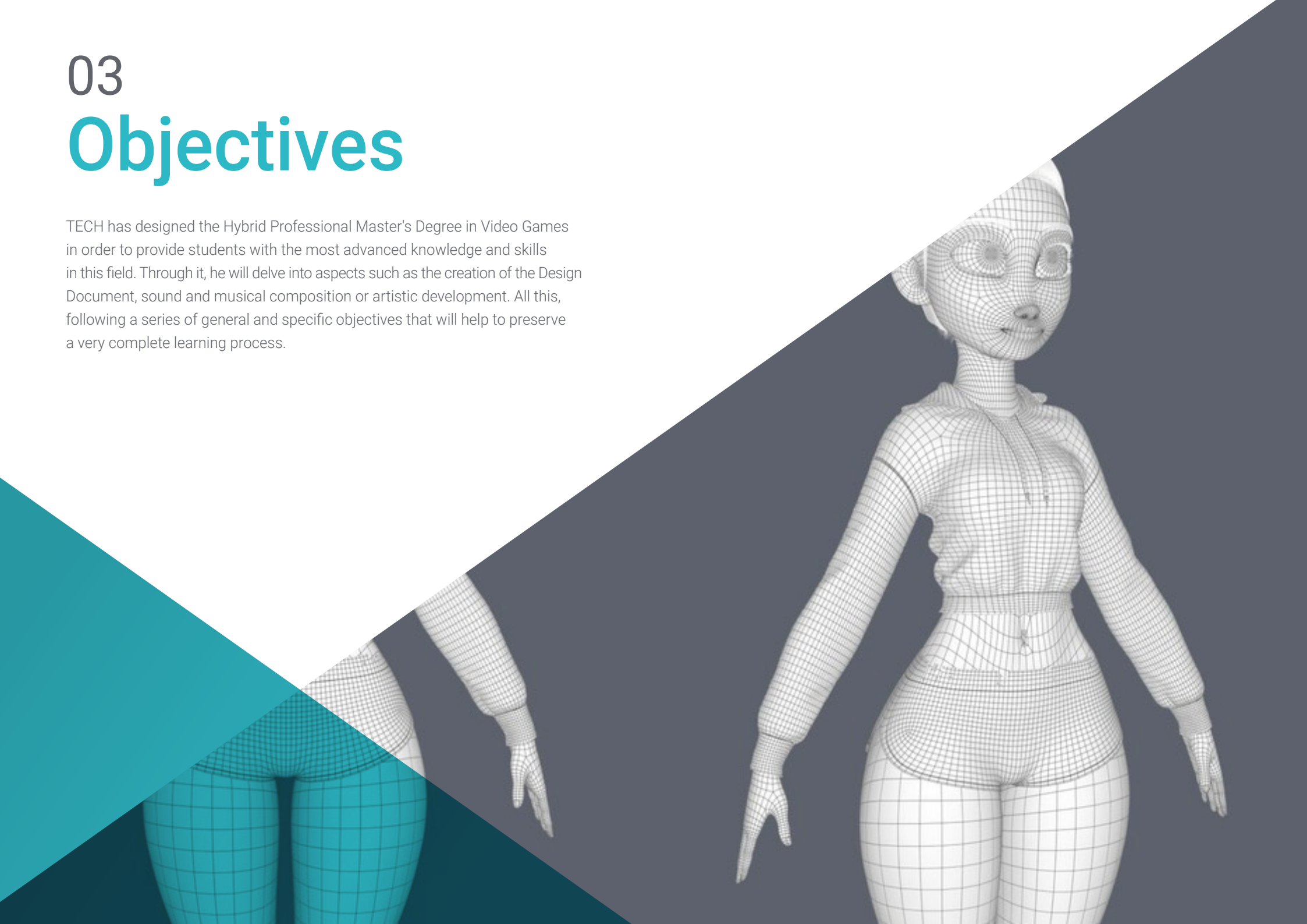
TECH offers students the opportunity to carry out their internships in renowned centers in the field of Video Games. In this way, students can learn from professionals who have participated in the creation of numerous projects in this area.

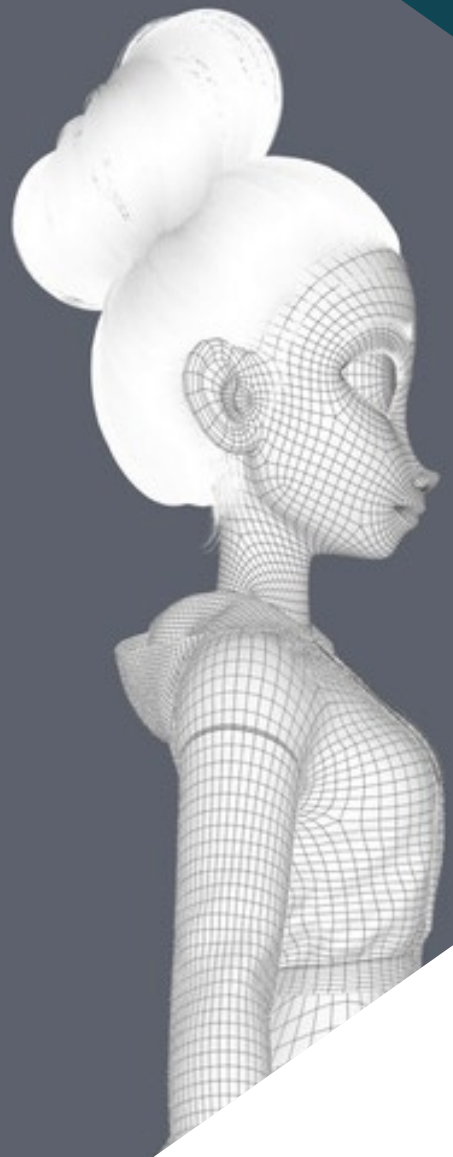
You will have full practical immersion at the center of your choice"

03

Objectives

TECH has designed the Hybrid Professional Master's Degree in Video Games in order to provide students with the most advanced knowledge and skills in this field. Through it, he will delve into aspects such as the creation of the Design Document, sound and musical composition or artistic development. All this, following a series of general and specific objectives that will help to preserve a very complete learning process.



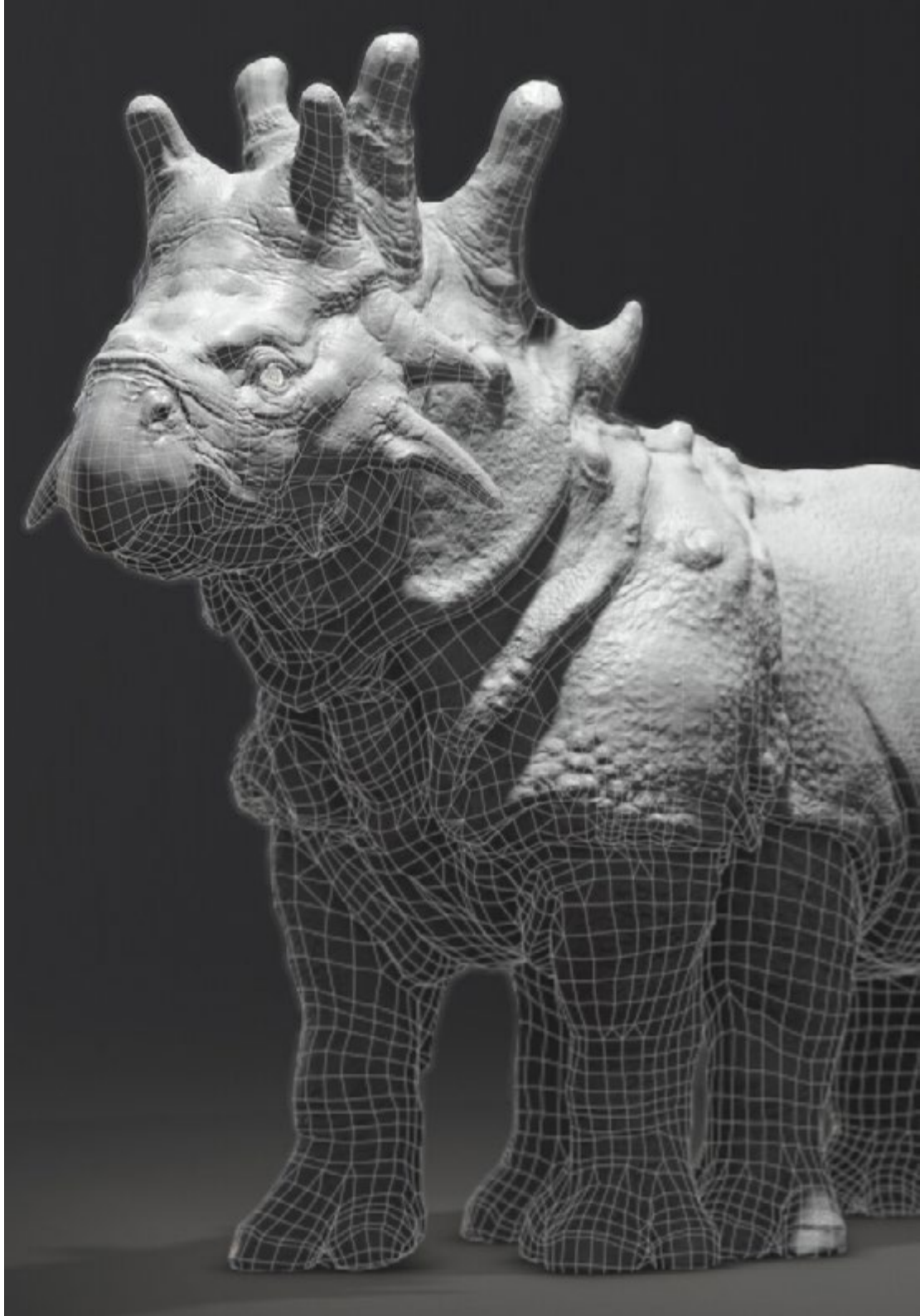


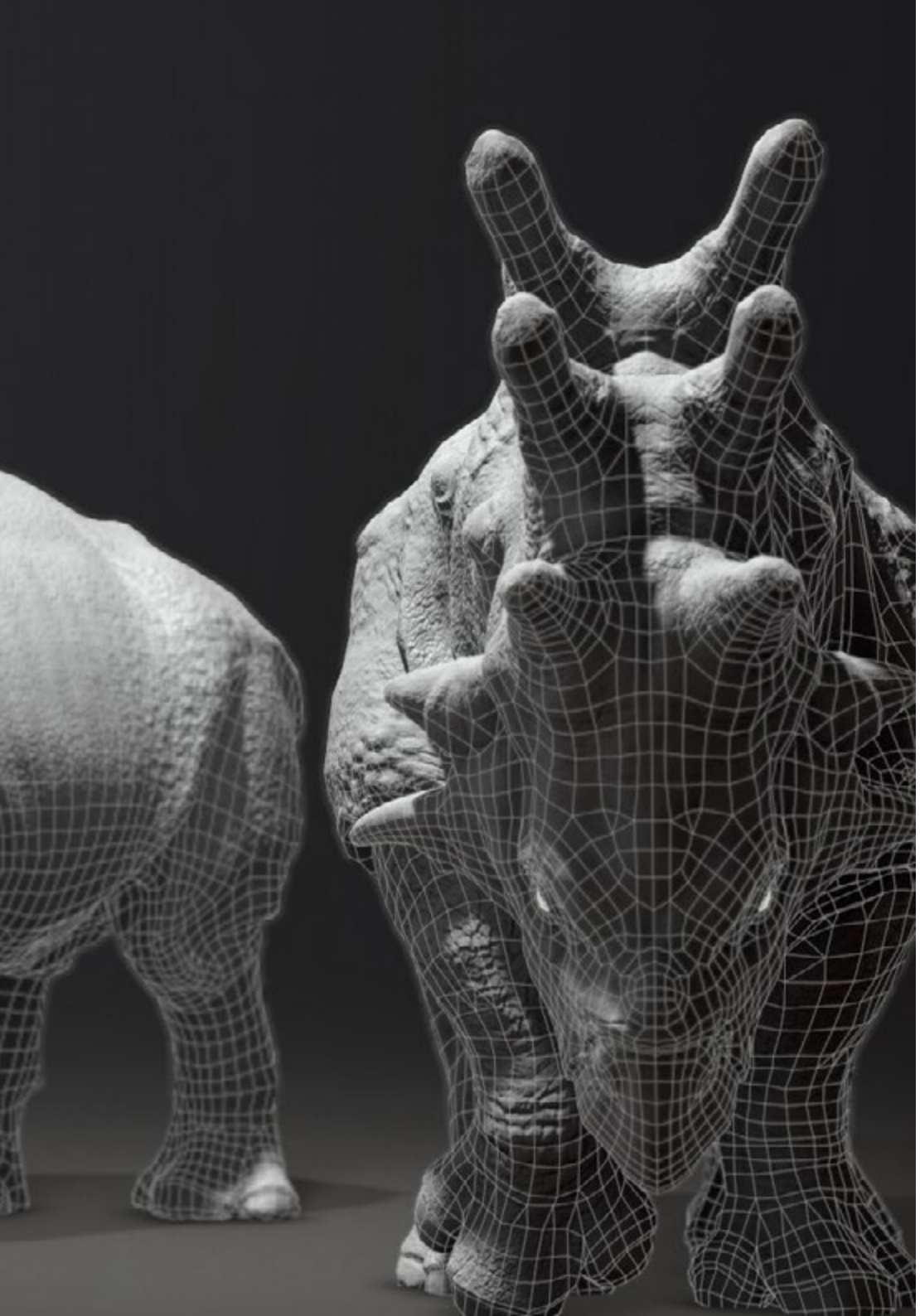
Develop your knowledge and skills in the field of Video Games through this complete Hybrid Professional Master's Degree"

General Objective

- The Hybrid Professional Master's Degree in Video Games aims to provide students with the most relevant knowledge in this area. To achieve this, the program combines high quality theoretical instruction with a 3-week internship at a renowned technology company. This last phase provides students with the opportunity to apply the knowledge acquired in a real environment, enabling the development of valuable and relevant skills for their professional career

Delve into fields such as artistic, sound or musical design of Video Games thanks to this TECH program"





Specific Objectives

Module 1. Video Game Design

- Get to know the theory of videogame design
- Delve into the elements of design and gamification
- Learn about the types of players, their motivations and characteristics
- Gain knowledge of game mechanics, knowledge of MDA and other game design theories
- Learn the critical foundations for video game analysis with theory and examples
- Learn about game level design, how to create puzzles within these levels and how to place the design elements in the environment

Module 2. Design Documentation

- Write and illustrate a professional design document
- Know each one of the parts of design: general idea, market, *gameplay*, mechanics, levels, progression, elements of the game, HUD and interface
- Know the design process of a design document or GDD to be able to represent the idea of the game in an understandable, professional and well-elaborated document

Module 3. Narrative and Script Design

- Understand general narrative and storytelling in video games
- Know the complex elements of storytelling such as characters, purpose and setting
- Delve into narrative structures and complex application in the design of a video game
- Get to know the latest news about the universe and settings such as fantasy or science fiction and their characteristics in the plots
- Have a thorough and practical knowledge of a story line
- Learn about the creation of main and secondary characters
- Delve into the structuring of a video game script and the difference between video games and cinema
- Gain knowledge the process of creating a script and the characteristics and elements for its creation

Module 4. Art in Video Games

- Gain knowledge about the artistic theory, color theory, character and environment theory
- Create complex sketches and *concept art*
- Get into the 2D art of characters, objects and environments with Photoshop programs
- Create 3D objects, characters and environments with 3D Studio Max and Mudbox
- Know the artistic styles of characters and scenery, as well as the typologies of setting and presentation in drawings

Module 5. Programming

- Handle the most used engine in videogame development: Unity 3D Engine
- Study Unity programming and learn the program's interface
- Learn about the creation of a 2D video game: programming character movements, enemies and animations
- Develop different elements of the game such as platforms or keys
- Create the game interface or HUD
- Expand knowledge in AI, both for the creation of enemies and 2D non-playable characters (NPCs)

Module 6. 3D Art

- Model and texturize 3D objects and characters
- Gain knowledge about the 3D Studio Max and Mudbox program interface for modeling objects and characters
- Understand the theory of 3D modeling
- Be able to extract textures
- Get to know how 3D cameras work

Module 7. Advanced Programming

- Know how to perform advanced programming
- Design 3D characters and environments
- Program different gameplays, environment puzzles and level objects
- Create different game elements and program player skills such as jump, run, shoot or hide
- Create a computer game

Module 8. Animation

- Perform 2D and 3D animation
- Gain knowledge about the theory of animation on elements and characters
- Gain knowledge about 2D animation *rigging*
- Perform animation in 3D Studio Max: element and character movement
- Learn about 3D Studio Max *Rigging*
- Know how to perform advanced character animations

Module 9. Sound and Music Design

- Compose and develop music
- Design music composition software
- Know how to carry out the production and post-production-production process
- Learn how to do internal mixing and sound design
- Use sound libraries, synthetic sounds and *foley*
- Know music composition techniques for videogames

Module 10. Production and Management

- Understand the production of a video game and the different stages
- Learn the types of producers
- Knowledge of project management for the development of video games
- Use different tools for production
- Coordinate teams and project management

04

Skills

Upon completion of the Hybrid Professional Master's Degree evaluations, the student will have acquired the necessary skills to design and create world-class video games. This will allow you to stand out in this growing industry, where competition is very high, by developing high quality programs.

Expand your skills in Video Game development through this comprehensive program"

General Skills

- Design all the phases in developing a video game, from start to the final launch
- Specialize in order to become an expert *video game* designer
- Delve into all parts of development, from the initial architecture, the programming of the player character, the implementation of animations, and the creation of the artificial intelligence of enemy characters and non-playable characters
- Obtain an overall vision of the project, being able to provide solutions to the different problems and challenges that arise in the design of a video game

Specific Skills

- Get to know the necessary tools to be a professional in the design and development of video games
- Understand the player's experience and know how to analyze video game gameplay
- Understand the entire theoretical and practical procedure of a Concept Artist's creation process
- Understand the theoretical and practical procedure of a 2D artist
- Know how to model and texture 3D objects and characters
- Have a broad knowledge of 2D and 3D video game programming
- Perform 2D and 3D animation for video games and apply 2D and 3D video game programming for different platforms
- Elaborate the musical composition and sound design

Be able to handle the main software used in the design and development of Video Games thanks to this very complete Hybrid Professional Master's Degree"

05

Course Management

The teaching staff of this program is made up of excellent experts in video game design, with extensive professional experience in the industry and a solid academic background. They all share a passion for this field and are committed to passing on their knowledge and skills to students. In this way, the student will have a series of skills that will allow him/her to perform with solvency in this field.

With the idea of providing you with the most advanced knowledge in the design and development of Video Games, TECH has selected an excellent teaching staff for this Hybrid Professional Master's Degree"

Management

Mr. Luis Felipe Blasco Vilches

- Narrative Designer at Saona Studios. Spain BORRAR
- Narrative Designer at Stage Clear Studios developing a confidential product
- Narrative Designer at HeYou Games in the Youturbo project
- Designer and Scriptwriter of e-Learning and Serious Games products for Telefónica Learning Services, TAK and Bizpills Group
- Level Designer in Indigo for the Meatball Marathon Project
- Professor of Scriptwriting in the Master's Degree in Videogame Creation at the University of Malaga
- Professor of the Videogame Area in Narrative Design and Production within the Film Department of TAI. Madrid
- Professor of Narrative Design and Script Workshops, and in the Videogame Design Degree at the School of Design
- Superior of Cinema, Animation and Video Games (ESCAV). Granada, Spain
- Degree in Hispanic Philology from the University of Granada
- Master's Degree in Creativity and Television Scriptwriting from the Rey Juan Carlos Univeristy

Professors

Ms. Alba Molas

- Video Game Designer at Gameloft. Barcelona
- Graduate in Film and Media from the School of Cinema and Audiovisuals of Catalonia
- Design of 3D Animation, Video Games and Interactive Environments at the CEV. School of Communication, Image and Sound
- Specialized Training in Children's Animation Scriptwriting at Showrunners BCN
- Member of: Women in Games Association, FemDevs Association

Mr. Rafael Carrión

- Designer, Music Producer and Sound Technician
- Assistant Technology Coordinator at Berklee College of Music
- Music Producer and Sound Designer at Banjo
- Sound Designer and Audio Programmer at Jellyworld Interactive
- Degree in Engineering with Specialization in Industrial Technologies from the Polytechnic University of Valencia
- Master's Degree in Video Games and Programming by the Universitat Oberta de Catalunya (UOC)
- AutoCAD 2016 Certification by the Polytechnic University of Valencia
- Certified in Game Audio Production with Wwise by Berklee Online

06

Educational Plan

The syllabus of this program has been designed to provide the student with the most relevant knowledge and skills in the field of Video Game design and development. The program's teaching resources are available in different formats, such as videos, readings and interactive summaries. Thanks to a 100% online teaching methodology, you will be able to manage your study schedules and receive learning adapted to your academic and personal preferences.

It has a curriculum designed by renowned specialists in the field of video game design and development"

Module 1. Video Game Design

1.1. The Design
- 1.1.1. Design
- 1.1.2. Types of Design
- 1.1.3. Design Process

1.2. Elements of Design
- 1.2.1. Rules
- 1.2.2. Balance
- 1.2.3. Fun

1.3. Types of Players
- 1.3.1. Explorer and Social
- 1.3.2. Killer and Achievers
- 1.3.3. Differences

1.4. Player Skills
- 1.4.1. Role Skills
- 1.4.2. Action Skills
- 1.4.3. Platform Skills

1.5. Game Mechanics I
- 1.5.1. Components
- 1.5.2. Physical
- 1.5.3. Items

1.6. Game Mechanics II
- 1.6.1. Keys
- 1.6.2. Platforms
- 1.6.3. Enemies

1.7. Other Elements
- 1.7.1. Mechanisms
- 1.7.2. Dynamics
- 1.7.3. Esthetics

1.8. Video Game Analysis
- 1.8.1. Gameplay Analysis
- 1.8.2. Artistic Analysis
- 1.8.3. Style Analysis

1.9. Level Design
- 1.9.1. Designing Interior Levels
- 1.9.2. Designing Exteriors Levels
- 1.9.3. Designing Mixed Levels

1.10. Advanced Level Design
- 1.10.1. Puzzles
- 1.10.2. Enemies
- 1.10.3. Environment.

Module 2. Design Documentation

2.1. Structure of the Document
- 2.1.1. Design Document
- 2.1.2. Structure
- 2.1.3. Style

2.2. General Idea, Market and References
- 2.2.1. General Idea
- 2.2.2. Market
- 2.2.3. References

2.3. Setting, Story and Characters
- 2.3.1. Ambience
- 2.3.2. History
- 2.3.3. Characters

2.4. *Gameplay*, Mechanisms and Enemies
- 2.4.1. *Gameplay*
- 2.4.2. Mechanisms
- 2.4.3. Enemies and NPC

2.5. Controls
- 2.5.1. Controller
- 2.5.2. Laptop
- 2.5.3. Computer

2.6. Levels and Progression
- 2.6.1. Levels
- 2.6.2. Journey
- 2.6.3. Progression

2.7. Items, Skills and Elements
- 2.7.1. Items
- 2.7.2. Skills
- 2.7.3. Components

2.8. Achievements
- 2.8.1. Medals
- 2.8.2. Secret Characters
- 2.8.3. Extra Points

2.9. HUD and Interface
- 2.9.1. HUD
- 2.9.2. Interface
- 2.9.3. Structure

2.10. Saved and Attached
- 2.10.1. Saved
- 2.10.2. Annexed Information
- 2.10.3. Final Details

Module 3. Narrative and Script Design

3.1. Video Game Narrative
- 3.1.1. Archetypes
- 3.1.2. Hero's Journey
- 3.1.3. Monomyth Structure

3.2. Elements of Narrative
- 3.2.1. Linear
- 3.2.2. Ramified
- 3.2.3. Funnels

3.3. Narrative Structures
- 3.3.1. Lineal Narratives Blocks
- 3.3.2. Environmental Narratives and Subplots
- 3.3.3. Other Types of Structures: Short Stories, 4 Acts

3.4. Resources
- 3.4.1. *Callbacks*
- 3.4.2. *Foreshadowing*
- 3.4.3. *Planting and Pay-Off*

3.5. Plot
- 3.5.1. The Plot
- 3.5.2. Dramatic Tension
- 3.5.3. Interest Curve

3.6. Characters I
- 3.6.1. Round and Flat
- 3.6.2. Character Evolution
- 3.6.3. Secondary Characters

3.7. Characters II
- 3.7.1. Psychology
- 3.7.2. Motivation
- 3.7.3. Skills

3.8. Types of Dialogues
- 3.8.1. Internal
- 3.8.2. External
- 3.8.3. Others

3.9. Script: The elements
- 3.9.1. Characteristic of the Script
- 3.9.2. Scenes and Sequences
- 3.9.3. Elements in a Script

3.10. Script: Writing
- 3.10.1. Structure
- 3.10.2. Style
- 3.10.3. Other Details

Module 4. Art in Video Games

4.1. Art
- 4.1.1. Artistic Foundations
- 4.1.2. Color Theory
- 4.1.3. Software

4.2. Concept Art
- 4.2.1. Sketch
- 4.2.2. Concept Art
- 4.2.3. Details

4.3. Video Game Scenarios
- 4.3.1. Non-Modular Scenarios
- 4.3.2. Modular Scenarios
- 4.3.3. Props and Environmental Objects

4.4. Ambience
- 4.4.1. Fantasy
- 4.4.2. Realistic
- 4.4.3. Science Fiction

4.5. Props and Objects
- 4.5.1. Organic
- 4.5.2. Inorganic
- 4.5.3. Details

4.6. Video Game Characters and Elements
- 4.6.1. Character creation
- 4.6.2. Creation of video game environments
- 4.6.3. Object and Prop Creation

4.7. Cartoon Styles
- 4.7.1. Cartoon
- 4.7.2. Manga
- 4.7.3. Hyperrealism

4.8. Manga Style
- 4.8.1. Manga Character Drawing
- 4.8.2. Manga Environment Drawing
- 4.8.3. Manga Objects Drawing

4.9. Realistic Style
- 4.9.1. Realistic Character Drawing
- 4.9.2. Realistic Environments
- 4.9.3. Realistic Objects

4.10. Final Details
- 4.10.1. Final Touches
- 4.10.2. Evolution and Style
- 4.10.3. Details and Enhancements

Module 5. Programming

5.1. Unity 3D Programming
- 5.1.1. Installation.
- 5.1.2. Elements of Interface
- 5.1.3. Create scene and import object

5.2. Terrain
- 5.2.1. Terrain I: Create a floor and mountains
- 5.2.2. Terrain II: Trees and flowers
- 5.2.3. Terrain III: Water and Skybox

5.3. 2D Character Creation
- 5.3.1. Collisions
- 5.3.2. Collisions
- 5.3.3. Trigger

5.4. Gameplay I
- 5.4.1. Programming: Skill Attack
- 5.4.2. Programming: Skill Jumping
- 5.4.3. Programming: Skill Shooting

5.5. Gameplay II
- 5.5.1. Programming: Weapons
- 5.5.2. Programming: Items
- 5.5.3. Programming: Checkpoint

5.6. IA: Enemies
- 5.6.1. Basic Enemy
- 5.6.2. Airborne Enemy
- 5.6.3. Complex Enemy

5.7. Programming Elements: Items and Platforms
- 5.7.1. Platform Motion
- 5.7.2. Pumps

5.8. 2D Character and Particle Animation
- 5.8.1. Importing Animations
- 5.8.2. Programming Animations
- 5.8.3. Particles

5.9. HUD and Interface Creation
- 5.9.1. Creation of Life
- 5.9.2. Creation of Texts and Dialogues
  - 5.9.2.1. Creation of Text
  - 5.9.2.2. Creation of Dialogue
  - 5.9.2.3. Response Selection

Module 6. 3D Art

6.1. Advanced Art
- 6.1.1. From Concept Art to 3D
- 6.1.2. 3D Model Principles
- 6.1.3. Types of Modeling: Organic / Inorganic

6.2. 3D Max Interface
- 6.2.1. 3D Max Software
- 6.2.2. Basic Interface
- 6.2.3. Organización escenas

6.3. Inorganic Modeling
- 6.3.1. Modeling with Primitives and Deformers
- 6.3.2. Editable Polygon Modeling
- 6.3.3. Modeling with Graphite

6.4. Organic Model
- 6.4.1. Character Modeling I
- 6.4.2. Character Modeling II
- 6.4.3. Character Modeling III

6.5. Creation of UVs
- 6.5.1. Basic Materials and Maps
- 6.5.2. Unwrapping and Texture Projections
- 6.5.3. Retopology

6.6. Advanced 3D
- 6.6.1. Creation of Texture Atlas
- 6.6.2. Hierarchies and Bone Creation
- 6.6.3. Application of a Skeleton

6.7. Animation Systems
- 6.7.1. Biped
- 6.7.2. CAT
- 6.7.3. Own Rigging

6.8. Facial Rigging
- 6.8.1. Expressions
- 6.8.2. Restrictions
- 6.8.3. Controllers

6.9. Principles of Animation
- 6.9.1. Cycles
- 6.9.2. Libraries and Use of MoCap Motion Capture Files
- 6.9.3. Motion Mixer

6.10. Export to Engines
- 6.10.1. Export to Unity Engine
- 6.10.2. Models Export
- 6.10.3. Animation Export

Module 7. Advanced Programming

7.1. Unity 3D Programming
- 7.1.1. 3D and Scene Creation
- 7.1.2. Software Architecture
- 7.1.3. *Game Manager*

7.2. 3D Character Creation
- 7.2.1. Movement
- 7.2.2. Jump
- 7.2.3. Attack

7.3. 3D Character Animation
- 7.3.1. Animation Types
- 7.3.2. Programming Animations
- 7.3.3. Advanced Animation Programming

7.4. Artificial Intelligence, NPCs and Enemies
- 7.4.1. IA
- 7.4.2. NPC
- 7.4.3. Enemies

7.5. Physical
- 7.5.1. Physical Materials
- 7.5.2. HInge Joint / Sprint Joint
- 7.5.3. Distance Joint / Wheel Joint

7.6. Physics II
- 7.6.1. Plataforma Efectorl
- 7.6.2. Platform Effector II
- 7.6.3. Surface Effector

7.7. Sound
- 7.7.1. Music
- 7.7.2. Sound Effects
- 7.7.3. Advanced SFX and Music Programming

7.8. Level Programming
- 7.8.1. Raycast
- 7.8.2. Pathfinding
- 7.8.3. Trigger on the Level

7.9. Particles and FX
- 7.9.1. Particle Creation I
- 7.9.2. Particle Creation II
- 7.9.3. Color and Effects

7.10. Options
- 7.10.1. Sound
- 7.10.2. Saved
- 7.10.3. Autosave

Module 8. Animation

8.1. Animation
- 8.1.1. Traditional Animation
- 8.1.2. 2D Animation
- 8.1.3. 3D Animation

8.2. 12 Principles of Animation I
- 8.2.1. Stretch and Shrink
- 8.2.2. Anticipation
- 8.2.3. Staging

8.3. 12 Principles of Animation II
- 8.3.1. Direct Action and Pose-by-Pose
- 8.3.2. Continuous and Superimposed Action
- 8.3.3. Acceleration and Deceleration

8.4. 12 Principles of Animation III
- 8.4.1. Arcs
- 8.4.2. Secondary Action
- 8.4.3. *Timing*

8.5. 12 Principles of Animation IV
- 8.5.1. Exaggeration
- 8.5.2. Solid Drawing
- 8.5.3. Personality

8.6. 3D Animation
- 8.6.1. 3D Animation I
- 8.6.2. 3D Animation II
- 8.6.3. 3D Kinematics

8.7. Advanced 2D Animation
- 8.7.1. Character Movements I
- 8.7.2. Character Movements II
- 8.7.3. Character Movements III

8.8. 2D Animation Rigging
- 8.8.1. Introduction to 2D Rig
- 8.8.2. 2D Rig Creation
- 8.8.3. 2D Facial Rig

8.9. 2D Animation
- 8.9.1. Object Movements I
- 8.9.2. Object Movements II
- 8.9.3. Object Movements III

8.10. Kinematics
- 8.10.1. Creation of a 2D Kinematic: Basic Introduction
- 8.10.2. Creation of a 2D Kinematic: Movements around
- 8.10.3. Creation of a 2D Kinematic: Export

Module 9. Sound and Music Design

9.1. Composition
- 9.1.1. Lineal Composition
- 9.1.2. Non-Lineal Composition
- 9.1.3. Creation of Themes

9.2. Musical Development
- 9.2.1. Instruments
- 9.2.2. The Orchestra and its Sections
- 9.2.3. Electronics

9.3. Software
- 9.3.1. Cubase Pro
- 9.3.2. Virtual Instruments
- 9.3.3. Plugins

9.4. Orchestration
- 9.4.1. MIDI Orchestration
- 9.4.2. Synthesizers and Digital Instruments
- 9.4.3. Pre-Mix

9.5. Post-Production
- 9.5.1. Post-Production
- 9.5.2. Finale
- 9.5.3. Plugins

9.6. Mixing
- 9.6.1. Internal Mix
- 9.6.2. Formats
- 9.6.3. Sound Design

9.7. Production
- 9.7.1. Sound Libraries
- 9.7.2. Synthetic Sounds
- 9.7.3. Foley

9.8. Composition Techniques for Video Games
- 9.8.1. Analysis I
- 9.8.2. II Analysis
- 9.8.3. Creation of Loops

9.9. Adaptive Systems
- 9.9.1. Horizontal re-sequencing
- 9.9.2. Vertical Remix
- 9.9.3. Stinger Transitions

9.10. Integration.
- 9.10.1. 3D Unity
- 9.10.2. FMOD
- 9.10.3. Master Audio

Module 10. Production and Management

10.1. Production
- 10.1.1. The Production Process
- 10.1.2. Production I
- 10.1.3. Production II

10.2. Phases of Video Game Development
- 10.2.1. Conception Phase
- 10.2.2. Design Phase
- 10.2.3. Planning Phase

10.3. Phases of Video Game Development II
- 10.3.1. Production Phase
- 10.3.2. Testing Phase
- 10.3.3. Distribution and Marketing Phase

10.4. Production and Management
- 10.4.1. CEO / General Manager
- 10.4.2. Chief Financial Officer
- 10.4.3. Sales Manager

10.5. The Production Process
- 10.5.1. Pre-production
- 10.5.2. Production
- 10.5.3. Post-Production

10.6. Job Positions and Functions
- 10.6.1. Designers
- 10.6.2. Programming
- 10.6.3. Artists

10.7. Game Designer
- 10.7.1. Creative Designer
- 10.7.2. Lead Designer
- 10.7.3. Senior Designer

10.8. Programming
- 10.8.1. Technical Director
- 10.8.2. Lead Programmer
- 10.8.3. Senior Programmer

10.9. Art
- 10.9.1. Creative Artist
- 10.9.2. Lead Artist
- 10.9.3. Senior Artist

10.10. Other Profiles
- 10.10.1. Lead Animator
- 10.10.2. Senior Animator
- 10.10.3. Juniors

Delve into the most relevant aspects of video game design from the hand of excellent specialists in the sector"

07

Practices

After completing the theoretical phase of the program, students will have the opportunity to complete an internship at a leading technology company. During this period, they will have the support of a tutor who will accompany them throughout the process, both in the preparation and in the realization of the internship.

Do your internship in a leading company dedicated to the design and development of technological projects"

During the final stage of the program, students will have the opportunity to complete an internship for 3 consecutive weeks, Monday through Friday, at a leading blue chip technology company. Throughout this period, they will be able to work in a real work environment and apply their skills in the design of Video Games, using advanced techniques and tools in this field.

This practical phase focuses on the perfection and development of skills necessary to undertake numerous processes of design and creation of video games. Students will have the opportunity to perform a variety of roles in a demanding professional environment, allowing them to develop their skills and prepare for the challenges they will face in their careers.

This innovative approach to teaching, therefore, will enable students to acquire in a practical way a set of skills that will enable them to excel in an ever-growing industry.

The practical part will be carried out with the active participation of the student performing the activities and procedures of each area of competence (learning to learn and learning to do), with the accompaniment and guidance of teachers and other training partners that facilitate teamwork and multidisciplinary integration as transversal competencies for the practice (learning to be and learning to relate).

The procedures described below will be the basis of the practical part of the training, and their implementation will be subject to the center's own availability and workload, the proposed activities being the following:

Module	Practical Activity
Design Document	Write and illustrate a professional design document
	Carry out the conception of the mechanics and levels of a video game
Narrative and script design	Create a storyline oriented to a video game
	Create main and secondary characters
	Properly structuring the script of a videogame
	Carry out the process of creating a script, taking into account the characteristics and elements available for its creation
Art for videogames	Create 2D designs of characters, objects and environments in Photoshop
	Create three-dimensional objects, characters and environments with 3D Studio Max and Mudbox
	Modeling and texturing 3D objects and characters
Programming	Perform advanced programming
	Design 3D characters and environments
	Program different gameplays, environment puzzles and level objects.
	Create different game elements and program player skills such as jumping, running, shooting or hiding
Animation	Rigging of a character in 3D Studio Max
	Perform advanced character animations

Civil Liability Insurance

This institution's main concern is to guarantee the safety of the trainees and other collaborating agents involved in the internship process at the company. Among the measures dedicated to achieve this is the response to any incident that may occur during the entire teaching-learning process.

To this end, this entity commits to purchasing a civil liability insurance policy to cover any eventuality that may arise during the course of the internship at the center.

This liability policy for interns will have broad coverage and will be taken out prior to the start of the practical training period. That way professionals will not have to worry in case of having to face an unexpected situation and will be covered until the end of the internship program at the center.

General Conditions of the Internship Program

The general terms and conditions of the internship agreement for the program are as follows:

1. TUTOR: During the Hybrid Professional Master's Degree, students will be assigned two tutors who will accompany them throughout the process, answering any doubts and questions that may arise. On the one hand, there will be a professional tutor belonging to the internship center who will have the purpose of guiding and supporting the student at all times. On the other hand, they will also be assigned with an academic tutor whose mission will be to coordinate and help the students during the whole process, solving doubts and facilitating everything they may need. In this way, the professional will be accompanied at all times and will be able to consult any doubts that may arise, both of a practical and academic nature.

2. DURATION: The internship program will have a duration of three continuous weeks, in 8-hour days, 5 days a week. The days of attendance and the schedule will be the responsibility of the center and the professional will be informed well in advance so that they can make the appropriate arrangements.

3. ABSENCE: If the students does not show up on the start date of the Hybrid Professional Master's Degree, they will lose the right to it, without the possibility of reimbursement or change of dates. Absence for more than two days from the internship, without justification or a medical reason, will result in the professional's withdrawal from the internship, therefore, automatic termination of the internship. Any problems that may arise during the course of the internship must be urgently reported to the academic tutor.

4. CERTIFICATION: Professionals who pass the Hybrid Professional Master's Degree will receive a certificate accrediting their stay at the center.

5. EMPLOYMENT RELATIONSHIP: the Hybrid Professional Master's Degree shall not constitute an employment relationship of any kind.

6. PRIOR EDUCATION: Some centers may require a certificate of prior education for the Hybrid Professional Master's Degree. In these cases, it will be necessary to submit it to the TECH internship department so that the assignment of the chosen center can be confirmed.

7. DOES NOT INCLUDE: The Hybrid Professional Master's Degree will not include any element not described in the present conditions. Therefore, it does not include accommodation, transportation to the city where the internship takes place, visas or any other items not listed

However, students may consult with their academic tutor for any questions or recommendations in this regard. The academic tutor will provide the student with all the necessary information to facilitate the procedures in any case.

08

Where Can I Do the Internship?

TECH provides students with the best internship opportunities. During a period of 3 weeks, students will have the opportunity to work in leading companies in the video game industry, applying their knowledge in a real work environment. In addition, they will have the opportunity to be part of a first class professional team that will help them acquire relevant and valuable skills for their development in this field.

Complete your excellent learning with an internship in a leading company in the world of Video Games"

The student will be able to complete the practical part of this Hybrid Professional Master's Degree at the following centers:

Lab66

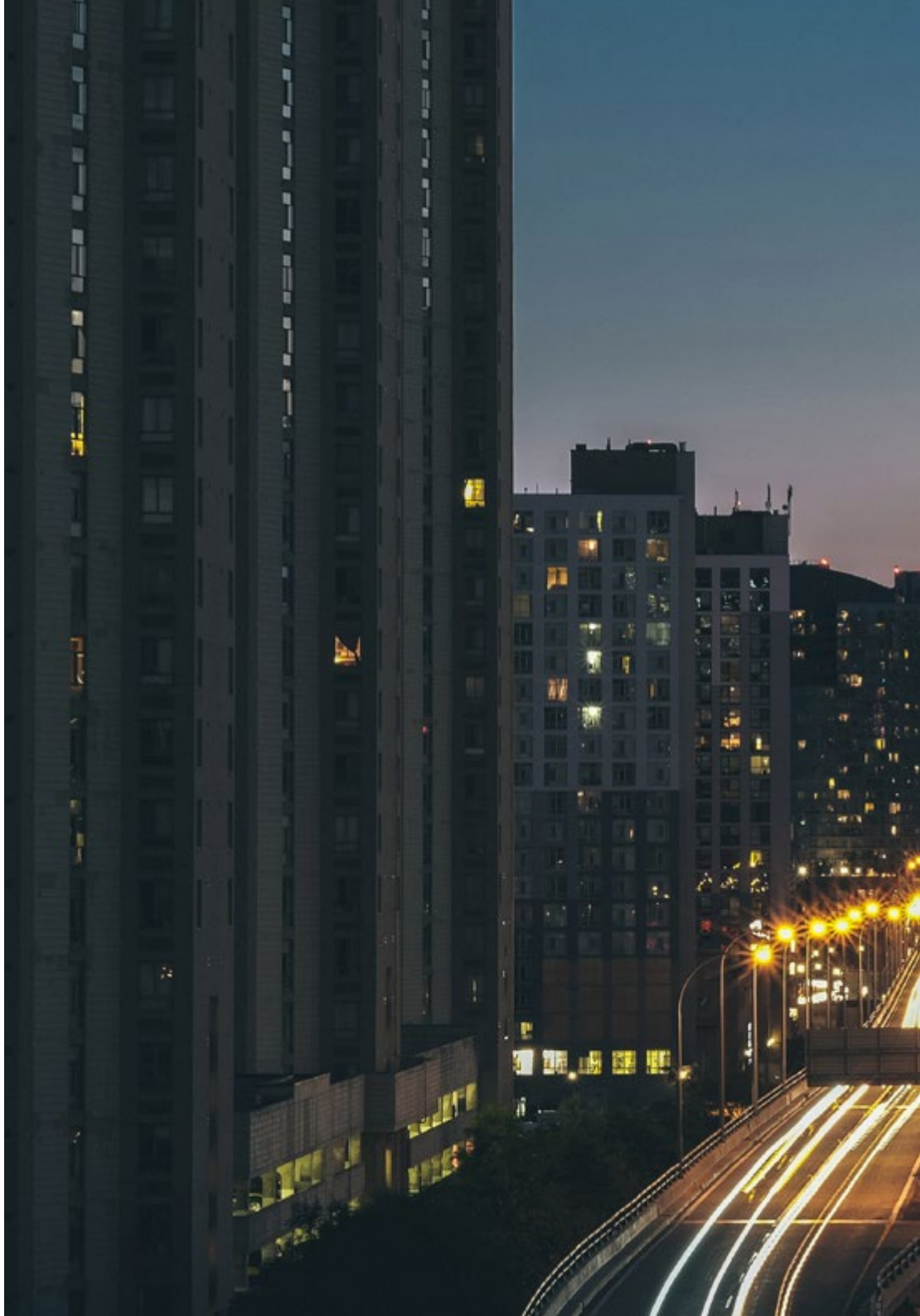
Country
Spain

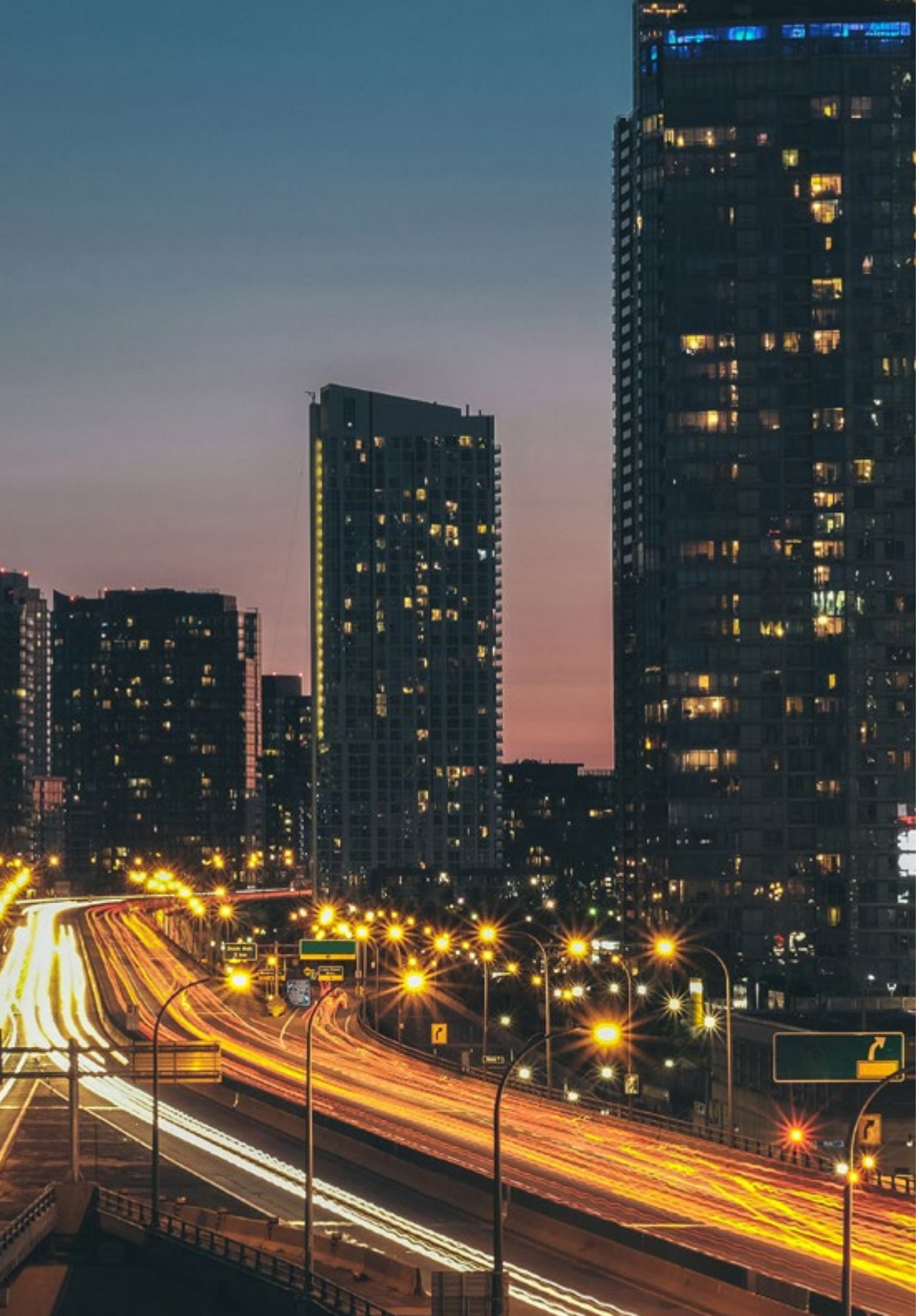
City
Navarra

Address: Tomás Caballero nº2,
1ª Planta Oficina 9, 31005

Studio specialized in Virtual Reality
and 3D Rendering

Related internship programs:
- Organic 3D Modeling
- Video Game Programming





Delve into the most relevant theory in this field, subsequently applying it in a real work environment"

09

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 is the most widely used learning system in the best faculties in the world. The case method was developed in 1912 so that law students would not only learn the law based on theoretical content. It consisted of presenting students with real-life, complex situations for them to make informed decisions and value judgments on how to resolve them. In 1924, Harvard adopted it as a standard teaching method.

What should a professional do in a given situation? This is the question we face in the case method, an action-oriented learning method. Throughout the program, the studies will be presented with multiple real cases. They will have to combine all their knowledge and research, and argue and defend their ideas and decisions.

Relearning Methodology

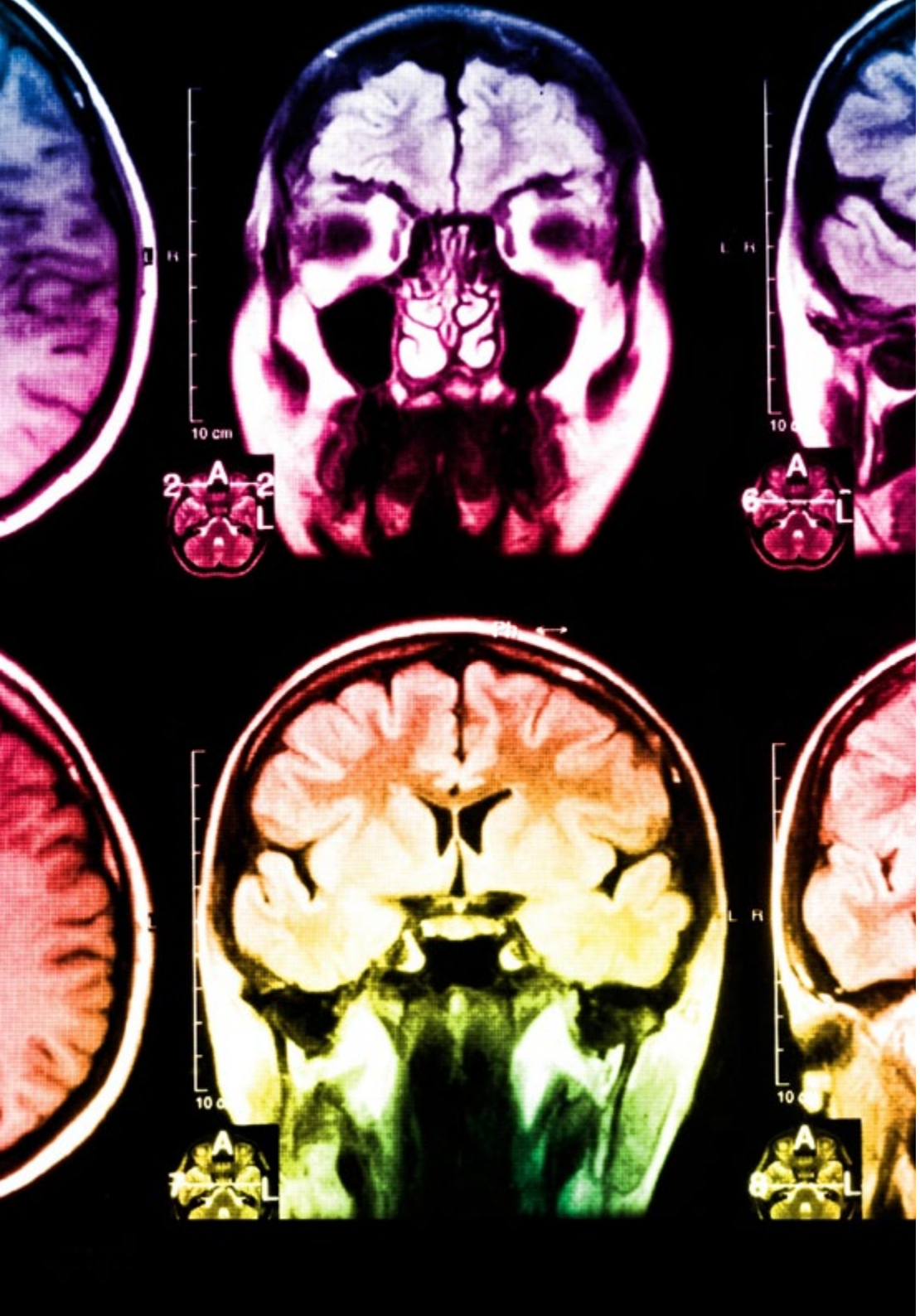
TECH effectively combines the Case Study methodology with a 100% online learning system based on repetition, which combines 8 different teaching elements in each lesson.

We enhance the Case Study with the best 100% online teaching method: Relearning.

In 2019, we obtained the best learning results of all online universities in the world.

At TECH you will learn using a cutting-edge methodology designed to train the executives of the future. This method, at the forefront of international teaching, is called Relearning.

Our university is the only one in the world authorized to employ this successful method. In 2019, we managed to improve our students' overall satisfaction levels (teaching quality, quality of materials, course structure, objectives...) based on the best online university indicators.



In our program, learning is not a linear process, but rather a spiral (learn, unlearn, forget, and re-learn). Therefore, we combine each of these elements concentrically. With this methodology we have trained more than 650,000 university graduates with unprecedented success in fields as diverse as biochemistry, genetics, surgery, international law, management skills, sports science, philosophy, law, engineering, journalism, history, markets, and financial instruments. All this in a highly demanding environment, where the students have a strong socio-economic profile and an average age of 43.5 years.

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

From the latest scientific evidence in the field of neuroscience, not only do we know how to organize information, ideas, images and memories, but we know that the place and context where we have learned something is fundamental for us to be able to remember it and store it in the hippocampus, to retain it in our long-term memory.

In this way, and in what is called neurocognitive context-dependent e-learning, the different elements in our program are connected to the context where the individual carries out their professional activity.

This program offers the best educational material, prepared with professionals in mind:

Study Material

All teaching material is produced by the specialists who teach the course, specifically for the course, so that the teaching content is highly specific and precise.

These contents are then applied to the audiovisual format, to create the TECH online working method All this, with the latest techniques that offer high quality pieces in each and every one of the materials that are made available to the student.

Classes

There is scientific evidence suggesting that observing third-party experts can be useful.

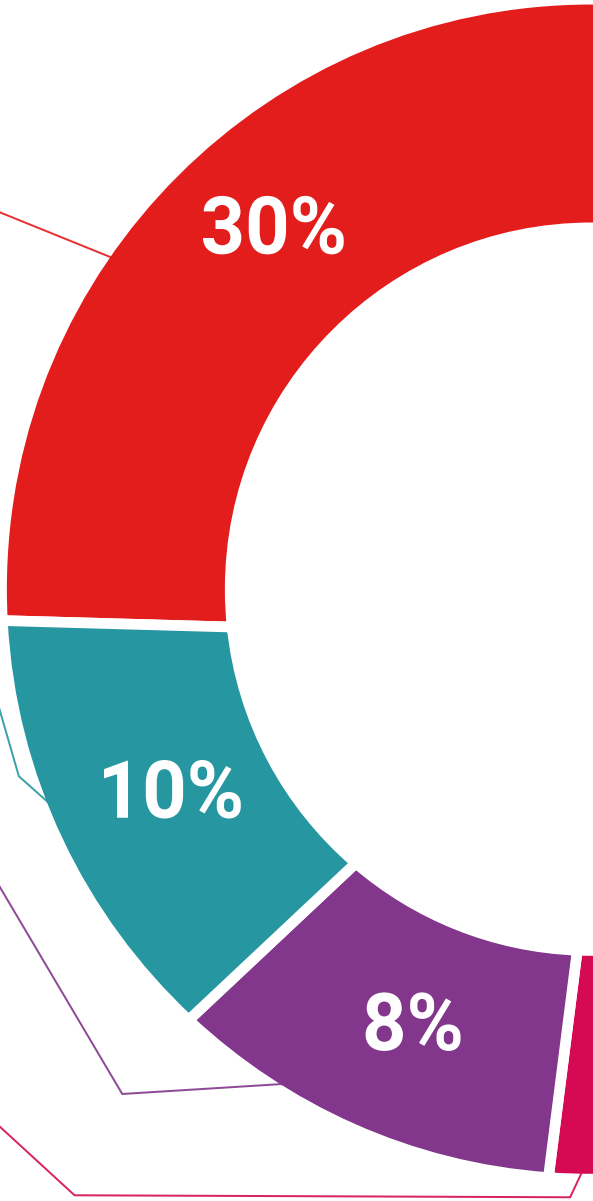
Learning from an Expert strengthens knowledge and memory, and generates confidence in future difficult decisions.

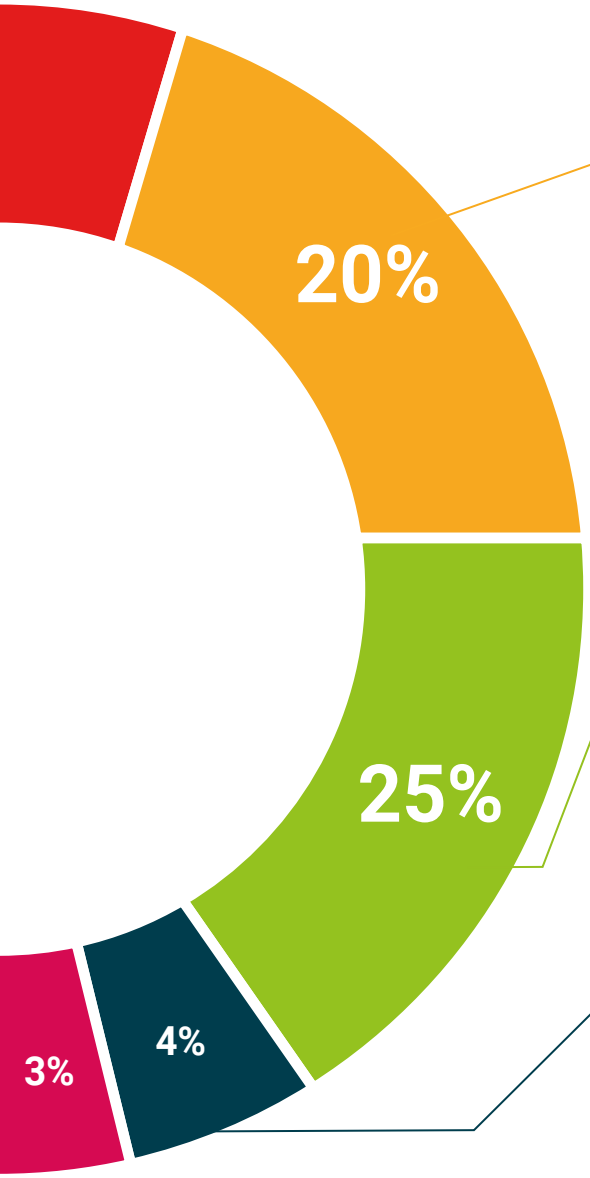
Practising Skills and Abilities

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

Additional Reading

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





Case Studies

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

Interactive Summaries

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

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

Testing & Retesting

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

10

Certificate

The Hybrid Professional Master's Degree in Video Games guarantees students, in addition to the most rigorous and up-to-date education, access to a Professional Master's Degree diploma issued by TECH Global University.

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

This program will allow you to obtain your **Hybrid Professional Master's Degree diploma in Video Games** 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** title 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.

Title: **Hybrid Professional Master's Degree in Video Games**

Course Modality: **Hybrid (Online + Internship)**

Duration: **12 months**

Certificate: **TECH Global University**

Recognition: **60 + 5 ECTS Credits**


tech global university

Mr./Ms. _____ with identification document _____
has successfully passed and obtained the title of:

Hybrid Professional Master's Degree in Video Games

This is a program of 1,620 hours of duration equivalent to 65 ECTS, with a start date of dd/mm/yyyy and an end date of dd/mm/yyyy.

TECH Global University is a university officially recognized by the Government of Andorra on the 31st of January of 2024, which belongs to the European Higher Education Area (EHEA).

In Andorra la Vella, on the 28th of February of 2024

Dr. Pedro Navarro Illana
Rector

Unique TECH Code: AFWORD23S techtitute.com/certificates


Hybrid Professional Master's Degree in Video Games

Subject type	ECTS
Compulsory (CO)	60
Optional (OP)	0
External Work Placement (WP)	5
Master's Degree Thesis (MDT)	0
Total	65

General Structure of the Syllabus

Year	Subject	ECTS	Type
1	Video Game Design	6	CO
1	Design Documentation	6	CO
1	Narrative and Script Design	6	CO
1	Art in Video Games	6	CO
1	Programming	6	CO
1	3D Art	6	CO
1	Advanced Programming	6	CO
1	Animation	6	CO
1	Sound and Music Design	6	CO
1	Production and Management	6	CO

Dr. Pedro Navarro Illana
Rector

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

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Hybrid Professional Master's Degree

Video Games

Modality: **Hybrid (Online + Internship)**

Duration: **12 months**

Certificate: **TECH Global University**

60 + 5 ECTS Credits

Hybrid Professional Master's Degree

Video Games

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