Hybrid Professional Master's Degree

Video Game Narrative

tech technological university

tech technological university

Hybrid Professional Master's Degree

Video Game Narrative

Modality: **Hybrid (Online + Internship)**
Duration: **12 months.**
Certificate: **TECH Technological University**
Teaching Hours: **1,620 hours.**
Website: www.techtitute.com/in/video-game/hybrid-professional-masters-degree/video-game-narrative

Index

01

Introduction

Titles such as "Inside", "Gone JHome", "Firewatch" or "The Last of Us" have achieved success in the video game industry thanks in large part to the narrative of the game itself. A booming sector with millions of gamers is the idyllic setting for professional screenwriters in this field to develop their full potential and gain access to the big studios that create video games. This program arises from the impulse of this professional profile for which a study plan has been developed with a theoretical framework taught 100% online and a practical training that will provide a more real learning from the hand of scriptwriting experts.

Build fictional, action-packed and unimaginable worlds with the knowledge acquired in this Hybrid Professional Master's Degree"

The video game industry moves millions around the world, and within this industry new professional profiles emerge to meet the demands of the most demanding gamers. Therefore, arises the figure of the scriptwriter, who develops a complete narrative of the game which is the creative basis of the title. This professional figure requires a high professional qualification that facilitates the handling of complex software and computer applications such as those that enhance the 3D modeling of characters and landscapes. They must also be familiar with the most innovative design strategies in this sector. In this context, TECH has created an educational program of excellence in which students will acquire all these skills in a practical and theoretical way.

In general, this Hybrid Professional Master's Degree responds to this revolution in the gaming industry and to professionals who want to specialize in order to enter a sector in expansion and with wide professional opportunities. For this reason, in the theoretical framework of this course taught in a completely online mode, students will achieve a deep knowledge of video game design, the main elements for scripting, as well as the different types of devices for video games and the engines in which they are developed.

An excellent opportunity for the professional who wishes to acquire an updated education in the field of storytelling in the video game sector, and at the same time make learning compatible with their work or personal responsibilities. This qualification provides flexibility as it is taught online, without fixed timetables and with access to all the content of the syllabus from the first day. You will only need a device with internet connection to have the most modern multimedia material in the academic field. At the same time, this education will be completed with an Internship Program that will bring students closer to one of the leading companies in the video game sector.

This **Hybrid Professional Master's Degree in Video Game Narrative**contains the most complete and up-to-date educational program on the market. Its most notable features are:

- The development of over 100 practical cases presented by experts in Videogames
- 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 cases presented by experts in Video Game Narrative
- 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 work
- Content that is accessible from any fixed or portable device with an Internet connection
- 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 do an internship in one of the best videogame creative studios of the world

For 3 weeks you will be with video game professionals who will show you everything you need to succeed in this sector"

You will have a library with multimedia content, essential readings and practical cases at your disposal, in order for you to obtain a complete learning.

Access the main keys that make up a success story in the video game industry.

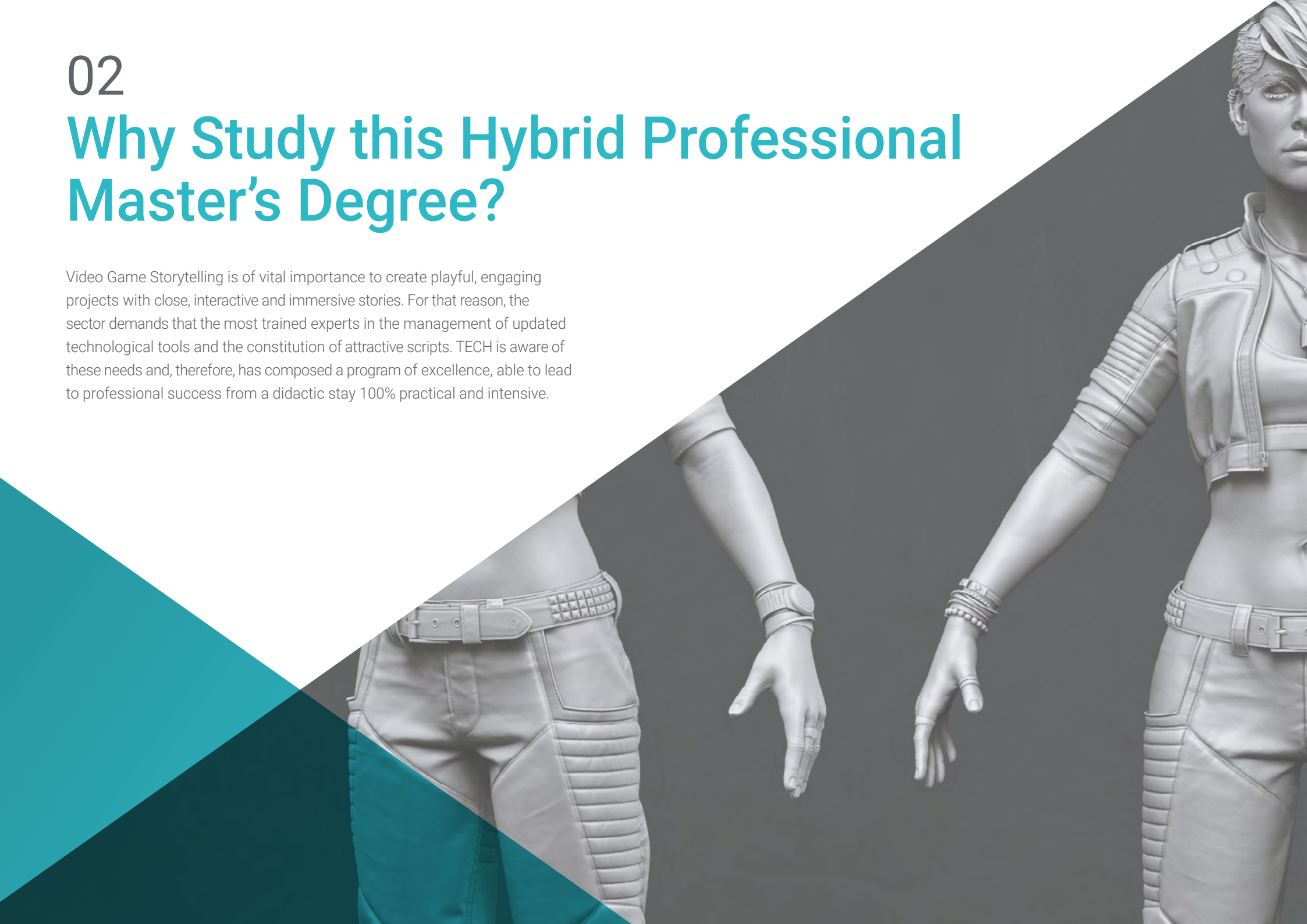
In this Hybrid Professional Master's Degree, with a vocational nature and hybrid learning modality, the program is aimed at updating videogame professionals who require a high level of qualification. The contents are based on the latest scientific evidence, and oriented in a didactic way to integrate theoretical knowledge in the practice of creating video games and all the components necessary to create successful and high quality titles.

Thanks to its multimedia content developed with the latest educational technology, they will allow the Video Games professional to learn in a contextual and situated learning environment, i.e., a simulated environment that will provide immersive learning programmed to train in real situations. This program is designed around Problem-Based Learning, whereby the physician must try to solve the different professional practice situations that arise during the course. This will be done with the help of an innovative system of interactive videos made by renowned experts.

02

Why Study this Hybrid Professional Master's Degree?

Video Game Storytelling is of vital importance to create playful, engaging projects with close, interactive and immersive stories. For that reason, the sector demands that the most trained experts in the management of updated technological tools and the constitution of attractive scripts. TECH is aware of these needs and, therefore, has composed a program of excellence, able to lead to professional success from a didactic stay 100% practical and intensive.



Thanks to TECH, you will learn how to raise characters and dialogues that can be used in the script of a video game under the fundamental principles of the narratives of that cultural industry"

1. Updating from the Latest Technology Available

The most innovative technologies for the development of playful narratives and the best methodologies to execute them are collected in this first-level Hybrid Professional Master's Degree. Therefore, after 1,500 hours of theoretical learning, the student will enjoy 3 weeks of practical training in the management of the most complex technologies at their disposal.

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

During this intensive classroom stay, students will have direct contact with the most outstanding teachers in the field of video games and the development of their narratives. Also, in the practical phase, they will have a designated tutor, who will provide them with updated knowledge and help them develop the most complex skills.

3. Enter premium environments for video game development

Through a thorough analysis of the academic landscape, TECH has chosen prestigious centers to receive its students during the professional practice phase. These companies stand out in the field of video games by their application of novel techniques and technologies for the creation of interactive and immersive products. At the same time, they have the most trained specialists of that field of knowledge.

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

Combining the best theory with the most advanced practice, TECH wants its students to learn quickly and flexibly the most requested skills of this professional field. To this end, it has developed a learning model that combines theoretical teaching with a high-level practical stay. From the skills developed in both stages, the student will acquire an indispensable qualification for their future work.

5. Expanding the Boundaries of Knowledge

TECH offers the possibilities to carry out the professional practice of this Hybrid Professional Master's Degree in leading international centers. This way, the specialist will be able to expand their frontiers and catch up with the best professionals, who practice in first class centers and in different continents.

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

03

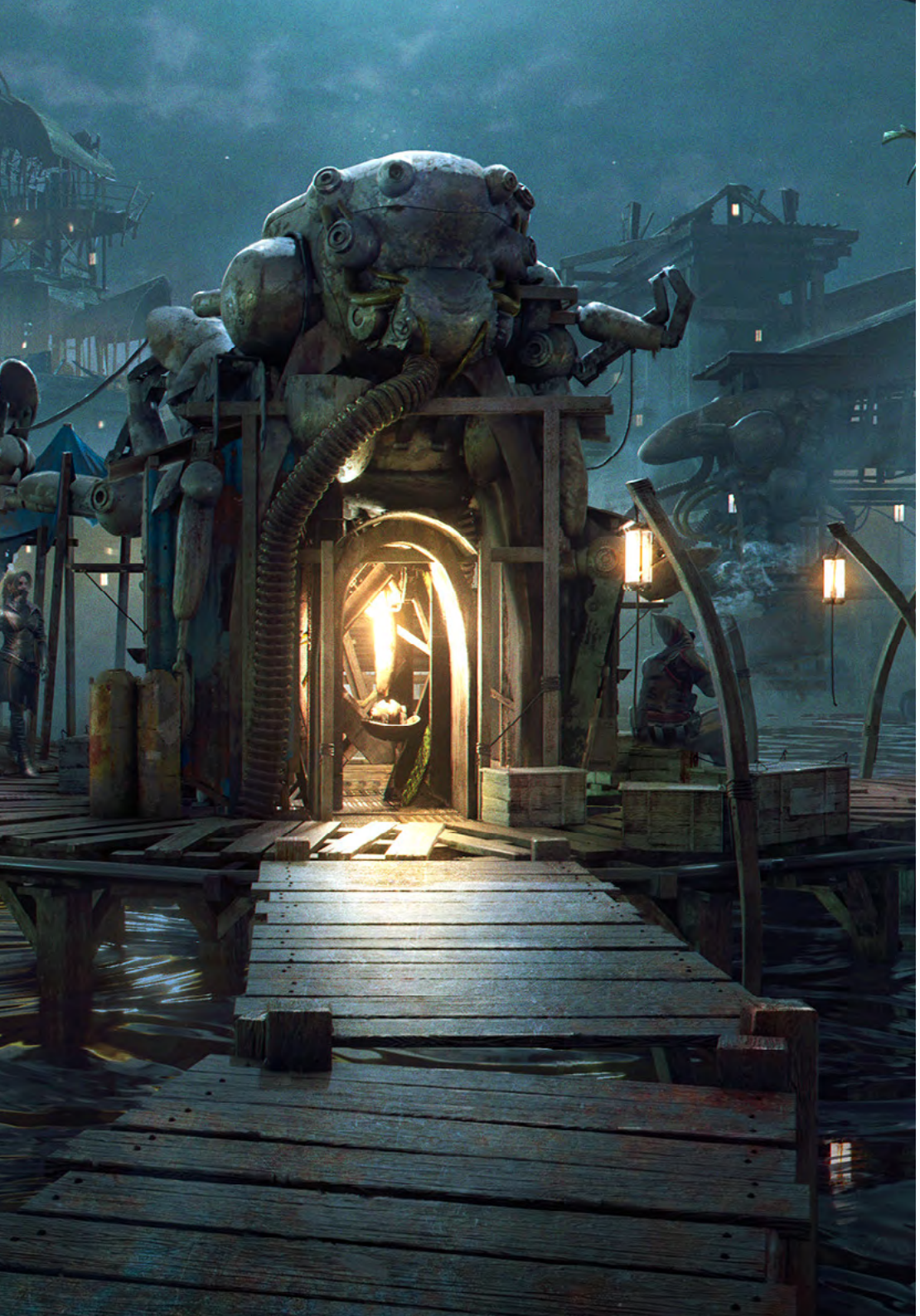
Objectives

This Hybrid Professional Master's Degree designed by TECH seeks students to achieve a specialization in the field of video game writing in an industry that increasingly demands a highly qualified professional profile and that dominates each of the elements that make up the video game. Multimedia material and case studies will be very useful in achieving these goals in a more comfortable and simple way.

Progress in your professional career with a Hybrid Professional Master's Degree that will take you into the world of video games"

General Objective

- The professional who delves into a specialization of storytelling in video games will achieve in this teaching a high learning in the creation of stories for all types of games. At the end of this hybrid program you will be able to create scripts and storyboards for any video game, taking into account the elements that make up the game, such as characters, the different stages of development, dialogue, narrative genres and the key concepts to be taken into account to achieve a quality narrative



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 Document

- 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. Video Game Narrative

- Determine the narrative pulses in certain audiovisual formats
- Develop own ideas in a creative and structured way in different texts
- Develop characters and dialogues that can be used in the script of a video game

Module 4. Video Game Design: Script and *Storyboarding*

- Gain in-depth knowledge of the history of video games, the main sources of ideas and the narrative through images
- Study the different elements that make up a script, the protagonists, antagonists and setting
- Address *Pitching* and how to effectively sell a script to a development group
- Review the history and evolution of *Storyboarding*, focusing on its specific use in the scripting of video games
- Delve into the narrative of arcade, FPS, RPGs, adventure and platform games
- Evaluate the use of love, humor, fear, horror and surrealism within narrative dialogues

Module 5. Consoles and Devices for Videogames

- Know the basic functioning of the main input and output peripherals
- Understand the main implications of design for different platforms
- Study the structure, organization, functioning and interconnection of devices and systems
- Understand the function of the operative system and the development kits for mobile devices and video game platforms

Module 6. Modeling

- Ascertain the internal structure of a video game engine
- Establish the elements of a modern video game architecture
- Understand the functions of each one of the video game components
- Examine examples of video games made with 2D and 3D graphics

Module 7. Video Game Engines

- Discover how a video game engine works and its architecture
- Understand the basic features of existing game engines
- Correctly and efficiently program applications applied to video game engines
- Choose the most appropriate paradigm and programming languages to program applications applied to video game engines

Module 8. Human-Computer Interaction

- Explore the different accessibility guidelines, the standards that establish them and the tools to evaluate them, as well as the different methods of interaction with the computer, through peripherals and devices
- Understand the importance of application usability and the different types of human diversity, the limitations they imply and how to adapt interfaces according to the specific needs of each of them
- Learn the process of interface design, from requirements analysis to evaluation
- Go through the various intermediate steps necessary to make a proper interface

Module 9. Video Games and Simulation for Research and Education

- Examine the main characteristics of representative serious games in the fields of education and research
- Understanding how video games can affect people's emotional state
- Obtain the ability to evaluate video games from different approaches

Module 10. Multiplayer Networks and Systems

- Describe the Transmission Control Protocol/Internet Protocol (TCP/IP) architecture and the basic operation of wireless networks
- Analyze Video Games Security
- Acquire the ability to develop online games for multiple players

This program gives you a practical teaching where you will take everything learned in the theoretical framework to the reality of the gaming industry"

04

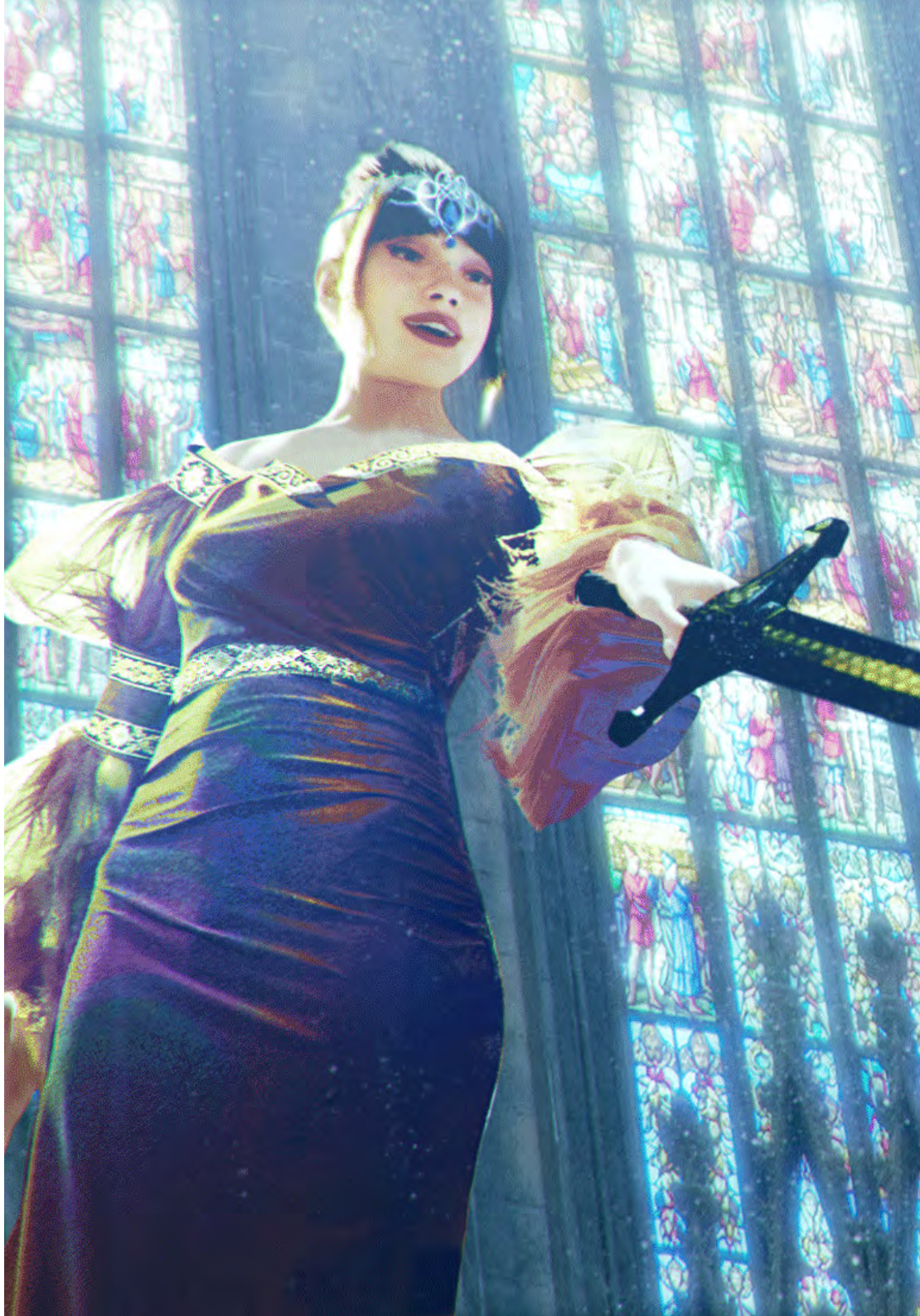
Skills

After passing this Hybrid Professional Master's Degree, students will obtain greater skills to distinguish all the narrative elements that make up a good story in the world of video games, of others that does not meet all the requirements required to capture the attention of currently more demanding players. An overview that will give you great skills and abilities to operate in a highly competitive sector.

With this program, you will create stories as bright as those of Disco Elysium"

General Skills

- Understand what makes a good story
- Know how to apply creative writing techniques to the creation of video game scripts
- Specialize as a video game script writer
- Gain in-depth knowledge of all parts of the development of a video game script, knowing, to perfection, all the phases involved
- 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
- Provide the project with creativity to achieve its objectives



Specific Skills

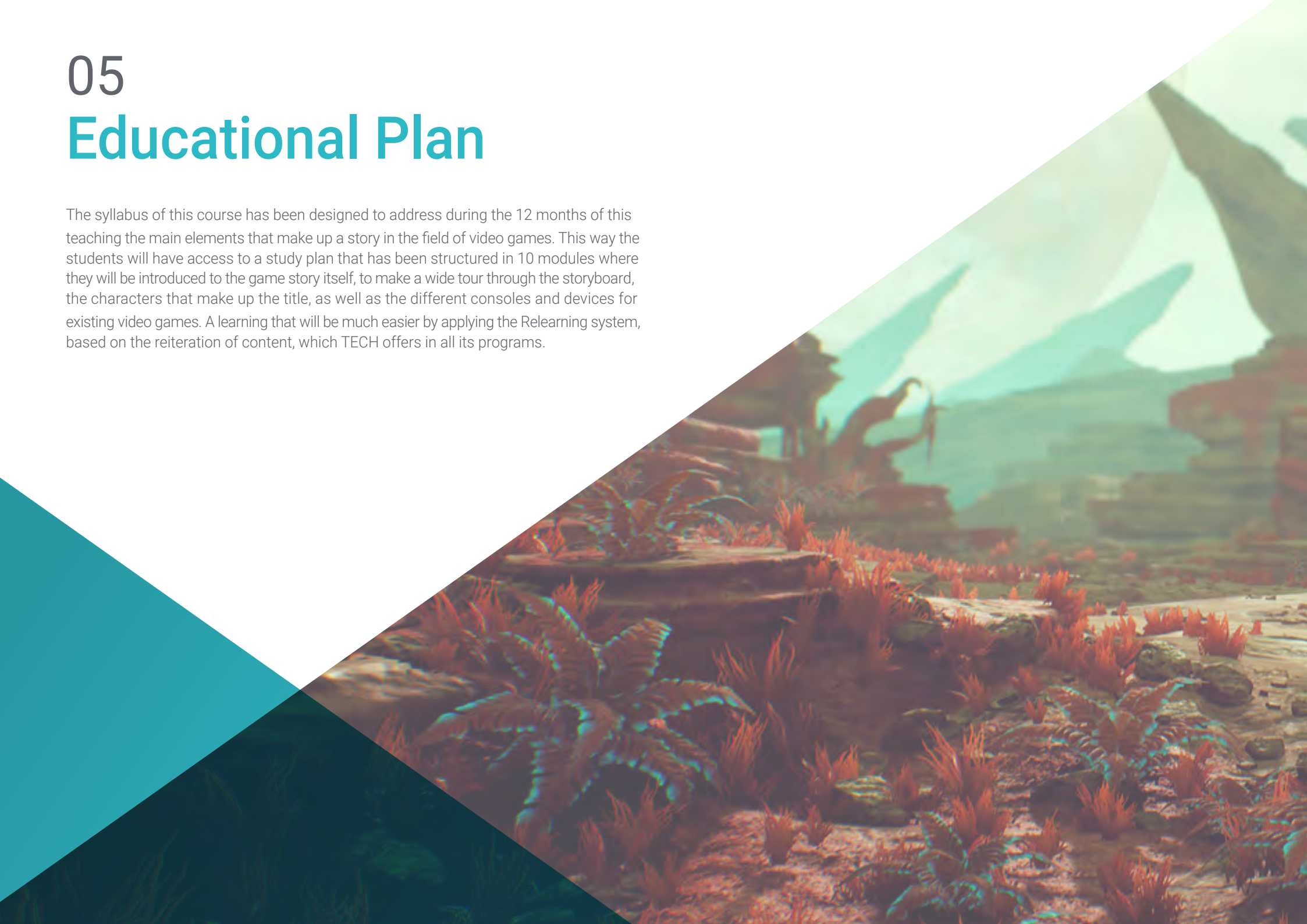
- Write video game scripts quickly and efficiently
- Write literary and technical scripts applied to this discipline
- Know tools such as Storyboard to develop the project in a correct way
- Respond to all the problems that may arise in the creative phase of the video game
- Understand the player's experience and know how to analyze video game gameplay
- Understand all the theoretical and practical procedures involved in the process of creating a video game in order to be able to integrate the work of scriptwriting appropriately

From this degree, the videogame professional will be able to write scripts quickly and efficiently"

05

Educational Plan

The syllabus of this course has been designed to address during the 12 months of this teaching the main elements that make up a story in the field of video games. This way the students will have access to a study plan that has been structured in 10 modules where they will be introduced to the game story itself, to make a wide tour through the storyboard, the characters that make up the title, as well as the different consoles and devices for existing video games. A learning that will be much easier by applying the Relearning system, based on the reiteration of content, which TECH offers in all its programs.



Learn to create high-level videogame stories with this Hybrid Professional Master's Degree"

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 Document

2.1. Structure of the Document
- 2.1.1. Design Document
- 2.1.2. Basic 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. Video Game Narrative

3.1. Why Tell a Story?
- 3.1.1. Introduction
- 3.1.2. Narration and Sense
- 3.1.3. Narrative Video Games vs. Action-Based Video Games
- 3.1.4. Subtleties in the Narrative

3.2. The Idea of Audiovisual Storytelling
- 3.2.1. Video Game Narrative
- 3.2.2. Video Game Script
- 3.2.3. Main Arguments in Different Video Game Plots
- 3.2.4. Structure, Characters and Dialogues Developed in the Video Game Script

3.3. The Structure of Audiovisual Storytelling
- 3.3.1. The Idea
- 3.3.2. The Structure of Storytelling
- 3.3.3. Genre, Format and Tone
- 3.3.4. Narrative Point of View

3.4. Content of the Story: Action Nodes and Types
- 3.4.1. Examples of Action Nodes
- 3.4.2. Practical Narrative Example I
- 3.4.3. Practical Examples Narrative II
- 3.4.4. Practical Examples Narrative III

3.5. Storytelling in a Video Game: Interaction
- 3.5.1. Introduction
- 3.5.2. Playable Nodes and Open Structures
- 3.5.3. Narration and Interaction
- 3.5.4. Applications of Interactive Narrative

3.6. Storytelling in a Video Game: Immersion
- 3.6.1. Introduction
- 3.6.2. Environmental Narrative
- 3.6.3. Visual Narrative of Characters
- 3.6.4. Evolution of the Narrative in Video Games

3.7. Creating Characters
- 3.7.1. Defining the Character
- 3.7.2. Pre-Production, Briefing, Submission Dates, Milestone
- 3.7.3. Basic Structure of the Character with Geometric Shapes. Understanding of the Canon and Proportions
- 3.7.4. Body Expression. Torsions. Giving Them Personality
- 3.7.5. Basic Structure of the Face, Facial Expressions and Variants in the Structure
- 3.7.6. Character Design Finishes According to the Needs of the Project
- 3.7.7. Preparation of the Character Sheet for Production

3.8. Principles of Interactive Narrative
- 3.8.1. Pragmatics of the Design. Persuasion and Seduction
- 3.8.2. Conflict and Idea in Interactive Speech
- 3.8.3. Character Building. Avatar and Player Representation
- 3.8.4. Narrative and Ludic Structures. Narrative Spaces in Video Games. Dialogue Tree and Ramifications

3.9. Theories of Interactive Narrative
- 3.9.1. Introduction to the Narrative and Interaction
- 3.9.2. Hypertext and Cybertext. Digital and Procedural Rhetoric
- 3.9.3. Ludonarrative and Ludofiction. Fictional Interactive Worlds
- 3.9.4. Applications of Interactive Narrative

3.10. History of the Narrative in Video Games
- 3.10.1. 1980-1990
- 3.10.2. 1990-2000
- 3.10.3. 2000-2010
- 3.10.4. 2010- Present Day

Module 4. Video Game Design: Script and Storyboarding

4.1. Script and Storyboard
- 4.1.1. History of the Video Game
- 4.1.2. Product Sheet
- 4.1.3. Ideas Source
- 4.1.4. Narrative through Images

4.2. Key Components in Scripts and Storyboard
- 4.2.1. The Conflict
- 4.2.2. Protagonist: Defining Keys
- 4.2.3. Antagonists, NPCs
- 4.2.4. The Scene

4.3. The Script: Key Concepts
- 4.3.1. The History
- 4.3.2. Argument
- 4.3.3. Literary Script
- 4.3.4. The Play-List
- 4.3.5. Technical Script

4.4. The Script: Fundamentals of the Narrative
- 4.4.1. Dialogue: The Rightful Importance of the Word
- 4.4.2. Types of Characters
- 4.4.3. How to Create a Character?
- 4.4.4. Transformation Arches
- 4.4.5. Pitching Selling a script

4.5. The Script: The Hero's Journey and the Aristotelian Figure
- 4.5.1. What is the Hero's Journey??
- 4.5.2. Stages of the Hero According to Vogler
- 4.5.3. How to Apply the Hero's Journey to Our Stories?
- 4.5.4. Examples of Applied Hero's Journey

4.6. Storyboard
- 4.6.1. Introduction, History and Evolution of the Art of the Storyboard
- 4.6.2. Functionality and Art
- 4.6.3. Writing and Drawings in Storyboard
- 4.6.4. Choice of Framing, Continuity, Angulation, Clarity
- 4.6.5. Staging of Characters: Preposing
- 4.6.6. Environments, Backgrounds and Shading
- 4.6.7. Written Information and Conventional Signs

4.7. The Animatic
- 4.7.1. Use of Animatic
- 4.7.2. Precursors to Animatic in Storyboard
- 4.7.3. How to Make an Animatic?
- 4.7.4. Timing

4.8. Genres and Polyhedral Narrative
- 4.8.1. Character Design
- 4.8.2. Adventure
- 4.8.3. Narrative Adventures
- 4.8.4. RPGs

4.9. Lineal Narratives
- 4.9.1. Arcades, FPS and Platform Games
- 4.9.2. Alternative Narratives
- 4.9.3. Serious Games and Simulators
- 4.9.4. Sport and Driving Games

4.10. Dialogue through a Script
- 4.10.1. Love, Humor and Surrealism
- 4.10.2. Fear, Horror and Disgust
- 4.10.3. Realistic Dialogues
- 4.10.4. Interpersonal Relationships

Module 5. Consoles and Devices for Videogames

5.1. History of Programming in Video Games
- 5.1.1. Atari (1977-1985)
- 5.1.2. Nintendo and Super Nintendo Entertainment Systems (NES and SNES) (1985-1995)
- 5.1.3. PlaysStation / PlayStation 2 Era (1995-2005)
- 5.1.4. Xbox 360, PlayStation 3 and Nintendo Wii Era (2005-2013)
- 5.1.5. Xbox One, PS4 and Wii U–Switch Era (2013-Present)
- 5.1.6. The Future

5.2. History of Gameplay in Video Games
- 5.2.1. Introduction
- 5.2.2. The Social Context
- 5.2.3. Structural Diagram
- 5.2.4. Future

5.3. Adapting to Modern Times
- 5.3.1. Games Based on Movement
- 5.3.2. Virtual Reality
- 5.3.3. Augmented Reality
- 5.3.4. Mixed Reality

5.4. Unity: Scripting I and Examples
- 5.4.1. What Is a Script?
- 5.4.2. Our First Script
- 5.4.3. Adding a Script
- 5.4.4. Opening a Script
- 5.4.5. MonoBehaviour
- 5.4.6. Debugging

5.5. Unity: Scripting II and Examples
- 5.5.1. Keyboard and Mouse Input
- 5.5.2. Raycast
- 5.5.3. Installation
- 5.5.4. Variables
- 5.5.5. Public and Serialized Variables

5.6. Unity: Scripting III and Examples
- 5.6.1. Obtaining Components
- 5.6.2. Modifying Components
- 5.6.3. Testing
- 5.6.4. Multiple Objects
- 5.6.5. Colliders and Triggers
- 5.6.6. Quaternions

5.7. Peripherals
- 5.7.1. Evolution and Classification
- 5.7.2. Peripherals and Interfaces
- 5.7.3. Current Peripherals
- 5.7.4. Near Future

5.8. Video Games: Future Perspectives
- 5.8.1. Cloud-Based Games
- 5.8.2. Absence of Controllers
- 5.8.3. Immersive Reality
- 5.8.4. Other Alternatives

5.9. Architecture
- 5.9.1. Special Needs in Video Games
- 5.9.2. Evolution of Architecture
- 5.9.3. Current Architecture
- 5.9.4. Differences Between Architecture

5.10. Development Kits and Their Evolution
- 5.10.1. Introduction
- 5.10.2. Third Generation of Development Kits
- 5.10.3. Fourth Generation of Development Kits
- 5.10.4. Fifth Generation of Development Kits
- 5.10.5. Sixth Generation of Development Kits

Module 6. Modeling

6.1. Introduction to C#
- 6.1.1. What is POO?
- 6.1.2. Visual Studio Environment
- 6.1.3. Types of Data
- 6.1.4. Type Conversions
- 6.1.5. Conditionals
- 6.1.6. Objects and Classes
- 6.1.7. Modularity and Encapsulation
- 6.1.8. Heritage
- 6.1.9. Abstract Classes
- 6.1.10. Polymorphism

6.2. Fundamentals of Mathematics
- 6.2.1. Mathematical Tools in Physics: Scalar and Vector Quantities
- 6.2.2. Mathematical Tools in Physics: Scalar Product
- 6.2.3. Mathematical Tools in Physics: Vector Product
- 6.2.4. Mathematics Tools in OOP

6.3. Physical Principles
- 6.3.1. Rigid Solids
- 6.3.2. Kinematics
- 6.3.3. Dynamics
- 6.3.4. Collisions
- 6.3.5. Projectiles
- 6.3.6. Flying

6.4. Fundamentals of Computer Graphics
- 6.4.1. Graphics Systems
- 6.4.2. 2D Graphics
- 6.4.3. 3D Graphics
- 6.4.4. Raster Systems
- 6.4.5. Geometric Modeling
- 6.4.6. Elimination of Hidden Parts
- 6.4.7. Realistic Visualization
- 6.4.8. OpenGL Graphics Library

6.5. Unity: Introduction and Installation
- 6.5.1. What Is Unity?
- 6.5.2. Why Unity?
- 6.5.3. Features of Unity
- 6.5.4. Installation

6.6. Unity: 2D and 3D
- 6.6.1. 2D Gameplay: Sprites y Tilemaps
- 6.6.2. 2D Gameplay: 2D Physics
- 6.6.3. Unity 2D Video Game Examples
- 6.6.4. Introduction to Unity 3D

6.7. Unity: Installation and Object Creation
- 6.7.1. Adding Components
- 6.7.2. Deleting Components
- 6.7.3. Importing Assets and Textures
- 6.7.4. Supplies and Maps for Materials

6.8. Unity: Interactions and Physics
- 6.8.1. Rigidbody
- 6.8.2. Colliders
- 6.8.3. Joints
- 6.8.4. Character Controllers
- 6.8.5. Continous Collision Detection (CCD)
- 6.8.6. Physics Debug Visualization

6.9. Unity: Basic Artificial Intelligence (AI) for NPCs
- 6.9.1. Pathfinding in Unity: Navmesh
- 6.9.2. AI Enemies
- 6.9.3. NPC Action Tree
- 6.9.4. NPC Hierarchy and Scripts

6.10. Unity: Animation Fundamentals and Implementation
- 6.10.1. Animation Controller: Character Association
- 6.10.2. Blend Tree: Combination Tree
- 6.10.3. State Transitions
- 6.10.4. Transition Threshold Modification

Module 7. Video Game Engines

7.1. Video Games and Information Communication Technology (ICT)
- 7.1.1. Introduction
- 7.1.2. Opportunities
- 7.1.3. Challenges
- 7.1.4. Conclusions

7.2. History of Video Game Engines
- 7.2.1. Introduction
- 7.2.2. Atari
- 7.2.3. The 80s
- 7.2.4. First Engines: The 90s
- 7.2.5. Current Engines

7.3. Video Game Engines
- 7.3.1. Types of Engines
- 7.3.2. Video Game Engine Parts
- 7.3.3. Current Engines
- 7.3.4. Selecting an Engine

7.4. Motor Game Maker
- 7.4.1. Introduction
- 7.4.2. Scenario Design
- 7.4.3. Sprites and Animations
- 7.4.4. Collisions
- 7.4.5. Scripting in Game Maker Languages (GML)

7.5. Unreal Engine 4: Introduction
- 7.5.1. What Is Unreal Engine 4? What Is Its Philosophy?
- 7.5.3. Materials
- 7.5.4. UI
- 7.5.5. Animations
- 7.5.6. Particle Systems
- 7.5.7. Artificial Intelligence
- 7.5.8. Frames Per Second (FPS)

7.6. Unreal Engine 4: Visual Scripting
- 7.6.1. Blueprints and Visual Scripting Philosophy
- 7.6.2. Debugging
- 7.6.3. Types of Variables
- 7.6.4. Basic Flow Control

7.7. Unity 5 Engine
- 7.7.1. C# y Visual Studio Programming
- 7.7.2. Creating Prefabs
- 7.7.3. Using Gizmos to Control Video Games
- 7.7.4. Adaptive Engine: 2D and 3D

7.8. Godot Engine
- 7.8.1. Godot Design Philosophy
- 7.8.2. Object-Oriented Design and Composition
- 7.8.3. All in One Package
- 7.8.4. Open and Community-Driven Software

7.9. RPG Maker Engine
- 7.9.1. RPG Maker Philosophy
- 7.9.2. Taking as a Reference
- 7.9.3. Creating a Game with Personality
- 7.9.4. Commercially Successful Games

7.10. Source 2 Engine
- 7.10.1. Source 2 Philosophy
- 7.10.2. Source and Source 2: Evolution
- 7.10.3. Community Use: Audiovisual Content and Video Games
- 7.10.4. Future of Source 2 Engine
- 7.10.5. Successful Mods and Games

Module 8. Human-Computer Interaction

8.1. Introduction to Human-Computer Interaction
- 8.1.1. What is Human-Computer Interaction?
- 8.1.2. Relationship of Human-Computer Interaction with Other Disciplines
- 8.1.3. The User Interface
- 8.1.4. Usability and Accessibility
- 8.1.5. User Experience and User-Centered Design

8.2. The Computer and Interaction: User Interface and Interaction Paradigms
- 8.2.1. Interaction
- 8.2.2. Paradigms and Styles of Interaction
- 8.2.3. Evolution of User Interfaces
- 8.2.4. Classic User Interfaces: WIMP/GUI, Commands, Voice, Virtual Reality
- 8.2.5. Innovative User Interfaces: Mobile, Wearable, Collaborative, BCI

8.3. The Human Factor: Psychological and Cognitive Aspects
- 8.3.1. The Importance of the Human Factor in Interaction
- 8.3.2. Human Information Processing
- 8.3.3. The Input and Output of Information: Visual, Auditory, and Tactile
- 8.3.4. Perception and Attention
- 8.3.5. Knowledge and Mental Models: Representation, Organization, and Acquisition

8.4. The Human Factor: Sensory and Physical Limitations
- 8.4.1. Functional Diversity, Disability and Impairment
- 8.4.2. Visual Diversity
- 8.4.3. Hearing Diversity
- 8.4.4. Cognitive Diversity
- 8.4.5. Motor Diversity
- 8.4.6. The Case of Digital Immigrants

8.5. The Design Process (I): Requirements Analysis for User Interface Design
- 8.5.1. User-Centered Design
- 8.5.2. What is Requirements Analysis??
- 8.5.3. Information Gathering
- 8.5.4. Analysis and Interpretation of the Information
- 8.5.5. Usability and Accessibility Analysis

8.6. The Design Process (II): Prototyping and Task Analysis
- 8.6.1. Conceptual Design
- 8.6.2. Prototyping
- 8.6.3. Hierarchical Task Analysis

8.7. The Design Process (III): Evaluation
- 8.7.1. Evaluation in the Design Process: Objectives and Methods
- 8.7.2. Evaluation Methods Without Users
- 8.7.3. Evaluation Methods with Users
- 8.7.4. Evaluation Standards and Norms

8.8. Accessibility: Definition and Guidelines
- 8.8.1. Accessibility and Universal Design
- 8.8.2. The WAI Initiative and the WCAG Guidelines
- 8.8.3. WCAG 2.0 and 2.1 Guidelines

8.9. Accessibility: Evaluation and Functional Diversity
- 8.9.1. Web Accessibility Evaluation Tools
- 8.9.2. Accessibility and Functional Diversity

8.10. The Computer and Interaction: Peripherals and Devices
- 8.10.1. Traditional Devices and Peripherals
- 8.10.2. Alternative Devices and Peripherals
- 8.10.3. Cell Phones and Tablets
- 8.10.4. Functional Diversity, Interaction and Peripherals

Module 9. Video Games and Simulation for Research and Education

9.1. Introduction to Serious Video Games
- 9.1.1. What Does a Serious Game Involve?
- 9.1.2. Features
- 9.1.3. Highlights
- 9.1.4. Advantages of Serious Games

9.2. Motivation and Objectives of Serious Games
- 9.2.1. Creation of Serious Games
- 9.2.2. Motivation of Serious Games
- 9.2.3. Objectives of Serious Games
- 9.2.4. Conclusions

9.3. Simulation Games
- 9.3.1. Introduction
- 9.3.2. Game- Simulation
- 9.3.3. Video Games and ICT
- 9.3.4. Games, Simulations and Management

9.4. Training-Oriented Design
- 9.4.1. Gamification Model
- 9.4.2. Rewards
- 9.4.3. Incentives
- 9.4.4. Gamification Applied to Work

9.5. How to Carry Out Effective Gamification
- 9.5.1. The Theory of Diversion
- 9.5.2. Gamification and Willpower
- 9.5.3. Gamification and New Technologies
- 9.5.4. Famous Examples

9.6. Learning: Game Flow and Progress
- 9.6.1. Game Flows
- 9.6.2. Feeling of Progress
- 9.6.3. Feedback
- 9.6.4. Degree of Completion

9.7. Learning Process: Game-Based Evaluation
- 9.7.1. Kahoot!
- 9.7.2. Methodology
- 9.7.3. Results
- 9.7.4. Conclusions Extracted

9.8. Fields of Study: Educational Application
- 9.8.1. Case Study: Application of Gamification Techniques in Class
- 9.8.2. Step 1: User and Context Analysis
- 9.8.3. Step 2: Learning Objectives Definition
- 9.8.4. Step 3: Designing the Experience
- 9.8.5. Step 4: Identifying Resources
- 9.8.6. Step 5: Application of Gamification Elements

9.9. Field of Study: Simulation and Mastery of Skills
- 9.9.1. Gamification, Simulators and Orientation Towards the Entrepreneurial Attitude
- 9.9.2. Sample
- 9.9.3. Data Collection
- 9.9.4. Data Analysis and Results
- 9.9.5. Conclusions

9.10. Field of Study: Therapy Tools (Real Cases)
- 9.10.1. Therapeutic Gamification: Main Objectives
- 9.10.2. Virtual Reality Therapies
- 9.10.3. Therapies with Adapted Peripherals
- 9.10.4. Conclusions Extracted

Module 10. Multiplayer Networks and Systems

10.1. History and Evolution of Multiplayer Video Games
- 10.1.1. The 1970s: First Multiplayer Games
- 10.1.2. The 90s: Duke Nuke, Doom and Quake
- 10.1.3. Rise of Multiplayer Video Games
- 10.1.4. Local and Online Multiplayer
- 10.1.5. Party Games

10.2. Multiplayer Business Games
- 10.2.1. Origin and Function of Emerging Business Models
- 10.2.2. Online Sales Services
- 10.2.3. Free to Play
- 10.2.4. Micropayments
- 10.2.5. Advertising
- 10.2.6. Monthly Payment Subscription
- 10.2.7. Pay to Play
- 10.2.8. Try before You Buy

10.3. Local and Network Games
- 10.3.1. Local Games: Beginnings
- 10.3.2. Party Games: Nintendo and Family Union
- 10.3.3. Networks Games: Beginnings
- 10.3.4. Network Games Evolution

10.4. OSI Model: Layers I
- 10.4.1. OSI Model: Introduction
- 10.4.2. Physical Layer
- 10.4.3. Data Link Layer
- 10.4.4. Network Layer

10.5. OSI Model: Layers II
- 10.5.1. Transport Layer
- 10.5.2. Session Layer
- 10.5.3. Presentation Layer
- 10.5.4. Application Layer

10.6. Computer Networks and the Internet
- 10.6.1. What Are Computer Networks?
- 10.6.2. Software
- 10.6.3. Hardware
- 10.6.4. Servers
- 10.6.5. Network Storage
- 10.6.6. Network Protocols

10.7. Mobile and Wireless Networks
- 10.7.1. Mobile Networks
- 10.7.2. Wireless Networks
- 10.7.3. How Mobile Networks Work
- 10.7.4. Digital Technology

10.8. Security/Safety
- 10.8.1. Personal Security
- 10.8.2. Video Game Hacks and Cheats
- 10.8.3. Anti-Cheating Safety
- 10.8.4. Anti-Cheating Security Systems Analysis

10.9. Multiplayer Systems: Servers
- 10.9.1. Server Hosting
- 10.9.2. Massively Multiplayer Online (MMO) Video Games
- 10.9.3. Dedicated Video Game Servers
- 10.9.4. Local Area Network (LAN) Parties

10.10. Multiplayer Video Game Design and Programming
- 10.10.1. Multiplayer Video Game Design Fundamentals in Unreal
- 10.10.2. Multiplayer Video Game Design Fundamentals in Unity
- 10.10.3. How to Make a Multiplayer Game Fun?
- 10.10.4. Beyond a Controller: Innovation in Multiplayer Controls

You like writing and video games. Join your two passions in this specialization. Enroll now"

06

Practices

After completing the theoretical stage taught online, students will have access to a practical stay where they can start all the learning acquired in the first phase of this degree. A training that will give you the opportunity to complete an apprenticeship with professionals specialized in the video game industry.

Sie verfügen über eine Bibliothek mit Multimedia-Ressourcen, auf die Sie 7 Tage die Woche und 24 Stunden am Tag zugreifen können"

The practical training period of this Video Game Narrative program consists of a 3-week stay in one of the most relevant creative and graphic design studios in the video game industry. In it, the students will be present from Monday to Friday, in days of 8 consecutive hours, together with highly qualified professionals with experience in the creation of games.

The attendance to this stay will give the students a learning closer to the reality of the industry and will know in detail how is the daily work of the writers and creators, applying all the techniques and strategies necessary to create a story of a game that has the quality and expected success in this sector.

In this training proposal, completely practical, activities are aimed at working on the development of a design document, analyzing the gameplay and characteristics of different types of games, know all its mechanisms and work on the interface as well as on the structure of it. All this taking into account the audience to which this title is addressed.

This practical training, which consists of a minimum of hours to complete, is an excellent opportunity for students who want to enter one of the industries that has had the most expansion in recent years and has promoted the emergence of new professional profiles.

Create the best video game story for different multiplayer business models"

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
Video Games Design Techniques	Practice the different types and methods of design
	Design at different levels, including the advanced level.
	Analyze the gameplay and features of different videogames
	Manage the interface and structure of a video game
	Know the different mechanisms of video games
	Create the script and storyboard of the videogame
	Work in the Elaboration of a design document
Trends in Videogame Narratives	Know the methods of video game structure and narrative.
	Apply the key concepts of scripting
	Adapt the importance of immersion in video game storytelling
	Delve into the importance of interaction
	Establish narrative through Images
Technologies and creative tools associated with video game development.	Delve into the mathematical fundamentals of 3D modeling
	Apply different 3D modeling skills
	Handle Unity software
	Work on the different existing video game engines
Networks and multiplayer systems in the video game	Handle different multiplayer business models
	Exercise the operation of the different existing servers.
	Delve into the narrative and operation of educational games (Serious Games)

Civil Liability Insurance

The university's main concern is to guarantee the safety of the interns, other collaborating professionals involved in the internship process at the center. 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, the university 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. Therefore 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 program agreement shall be as follows:

1. TUTOR: During the Internship Program, students will be assigned with 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 student will be accompanied and will be able to discuss any doubts that may arise, both clinical and academic.

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 Internship Program, 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 Internship Program will receive a certificate accrediting their stay at the center.

5. EMPLOYMENT RELATIONSHIP: The Internship Program shall not constitute an employment relationship of any kind.

6. PRIOR EDUCATION: Some centers may require a certificate of prior education for the Internship Program. 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 Internship Program 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.

07

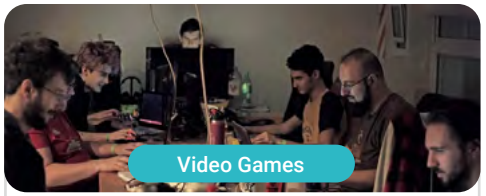
Where Can I Do the Internship?

The syllabus of this Hybrid Professional Master's Degree program includes a practical internship in a renowned video game company.

In order to fulfill its commitment to offer quality education, TECH has selected companies in the sector that provide real learning of great value to the students. During the stay, the student will have the support of the teaching team that teaches the degree.

Complete your apprenticeship in a benchmark company in the video game industry"

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



Startreming Games

Country
Argentina

City
Mendoza

Management: Route 160 corner Buenos Aires 88, San Rafael, Mendoza, Argentina.

Independent game development studio with remote work.

Related internship programs:
- Video Game Programming
- 3D Hard Surface Modeling

Script and Storyboard

Make the most of this opportunity to surround yourself with expert professionals and learn from their work methodology"

08

Methodology

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

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

Discover Relearning, a system that abandons conventional linear learning, to take you through cyclical teaching systems: a way of learning that has proven to be extremely effective, especially in subjects that require memorization"

Case Study to contextualize all content

Our program offers a revolutionary approach to developing skills and knowledge. Our goal is to strengthen skills in a changing, competitive, and highly demanding environment.

At TECH, you will experience a learning methodology that is shaking the foundations of traditional universities around the world"

You will have access to a learning system based on repetition, with natural and progressive teaching throughout the entire syllabus.

The student will learn to solve complex situations in real business environments through collaborative activities and real cases.

A learning method that is different and innovative

This TECH program is an intensive educational program, created from scratch, which presents the most demanding challenges and decisions in this field, both nationally and internationally. This methodology promotes personal and professional growth, representing a significant step towards success. The case method, a technique that lays the foundation for this content, ensures that the most current economic, social and professional reality is taken into account.

> *Our program prepares you to face new challenges in uncertain environments and achieve success in your career"*

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

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

Relearning Methodology

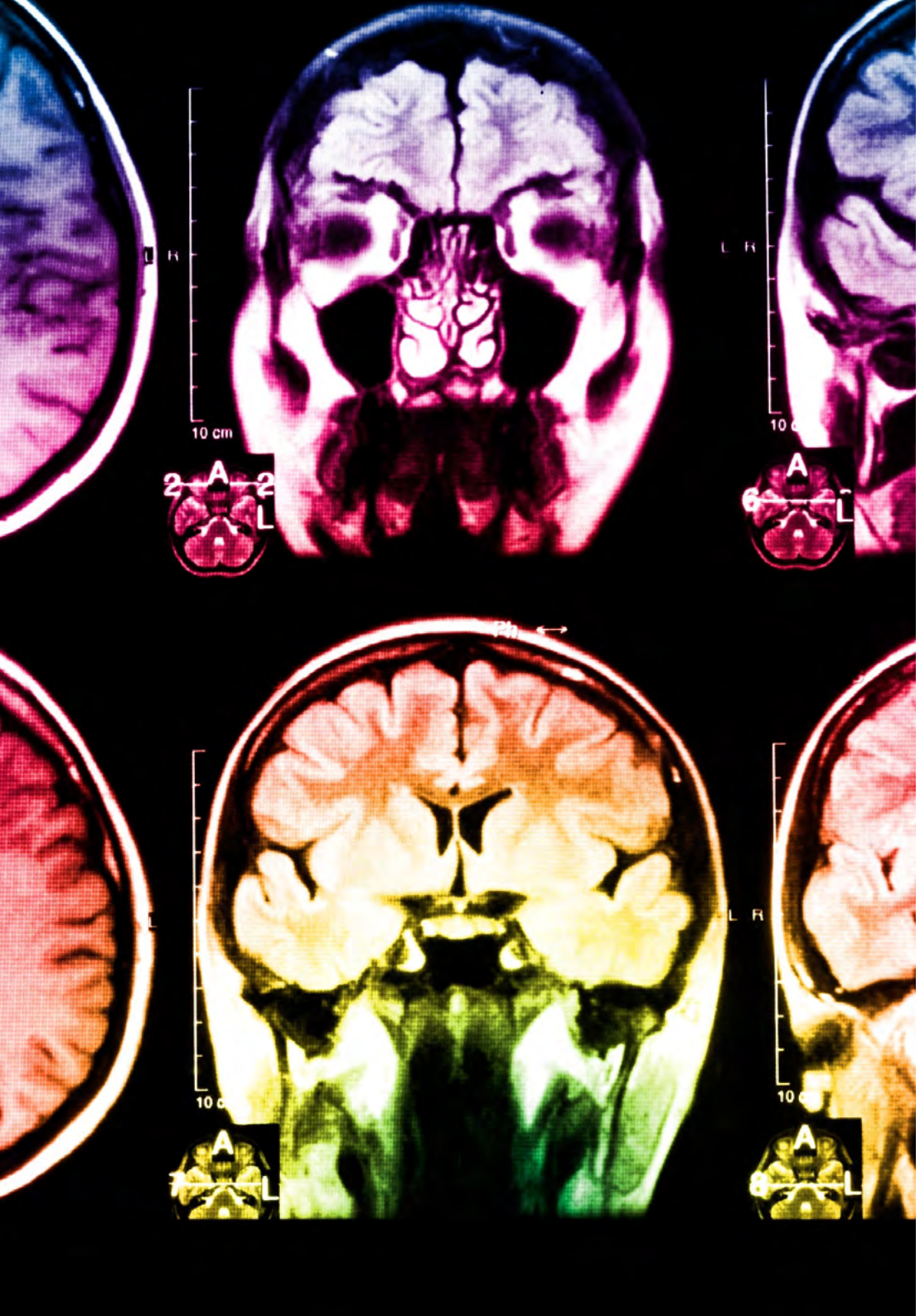
TECH effectively combines the Case Study methodology with a 100% online learning system based on repetition, which combines 8 different teaching elements in each lesson.

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

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

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

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



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

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

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

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

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

Study Material

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

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

Classes

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

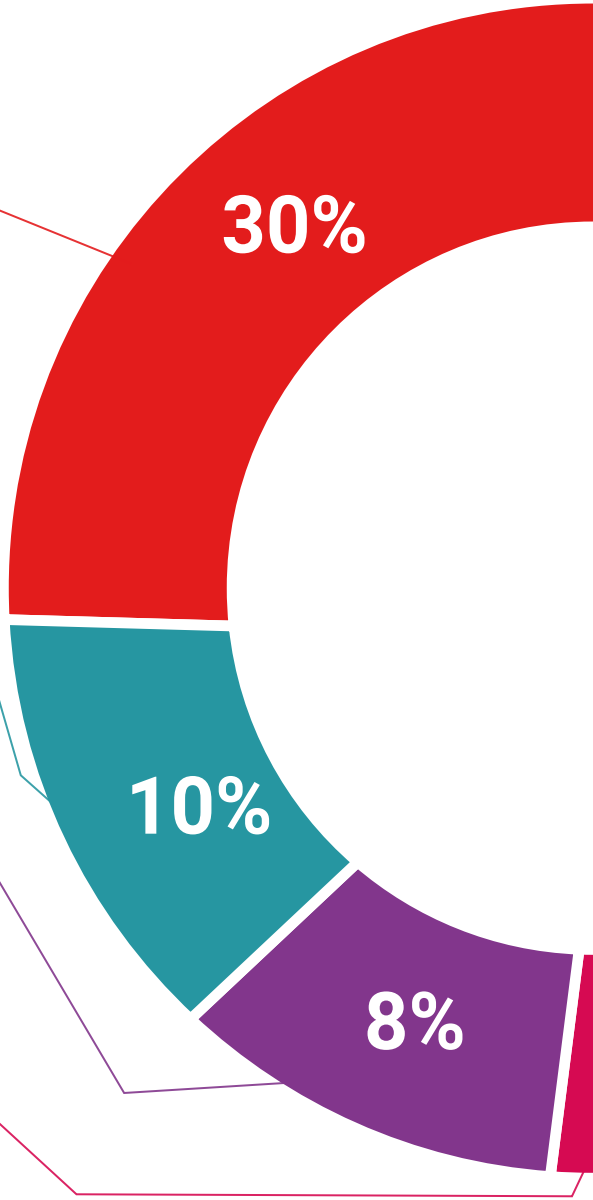
Learning from an Expert strengthens knowledge and memory, and generates confidence in future difficult decisions.

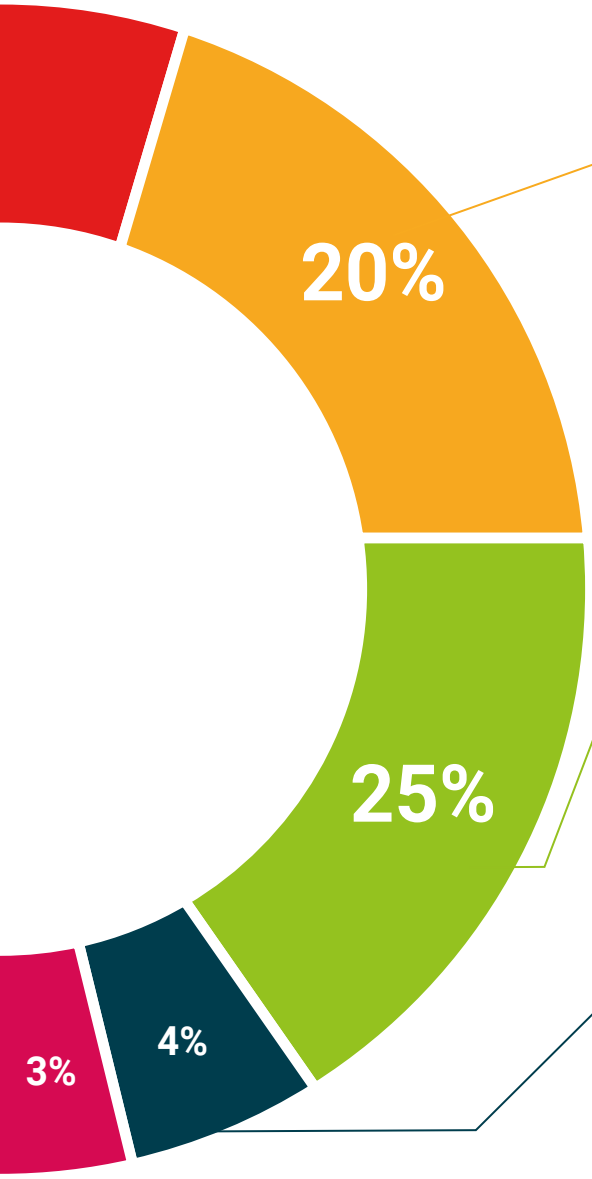
Practising Skills and Abilities

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

Additional Reading

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





Case Studies

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

Interactive Summaries

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

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

Testing & Retesting

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

09

Certificate

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

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

This **Hybrid Professional Master's Degree in Video Game Narrative** contains the most complete and up-to-date program on the professional and educational field.

After the student has passed the assessments, they will receive their corresponding Hybrid Professional Master's Degree diploma issued by **TECH Technological University** via tracked delivery*.

In addition to the certificate, students will be able to obtain an academic transcript, as well as a certificate outlining the contents of the program. In order to do so, students should contact their academic advisor, who will provide them with all the necessary information.

Title: **Hybrid Professional Master's Degree in Video Game Narrative**

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

Duration: **12 months.**

Certificate: **TECH Technological University**

Teaching Hours: **1,620 hours.**

tech technological university

Awards the following

CERTIFICATE

to

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

For having successfully passed and accredited the following program

PROFESSIONAL MASTER'S DEGREE

in

Video Game Narrative

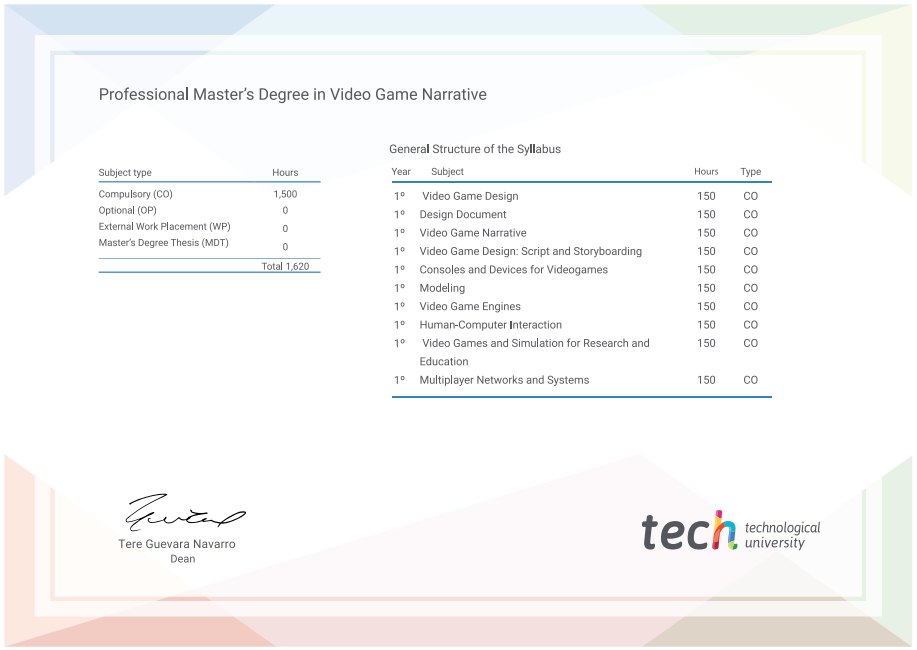
This is a qualification awarded by this University, equivalent to 1,620 hours, with a start date of dd/mm/yyyy and an end date of dd/mm/yyyy.

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

June 17, 2020

Tere Guevara Navarro
Dean

Unique TECH Code: AFWORD23S techtitute.com/certificates



Professional Master's Degree in Video Game Narrative

Subject type	Hours
Compulsory (CO)	1,500
Optional (OP)	0
External Work Placement (WP)	0
Master's Degree Thesis (MDT)	0
	Total 1,620

General Structure of the Syllabus

Year	Subject	Hours	Type
1º	Video Game Design	150	CO
1º	Design Document	150	CO
1º	Video Game Narrative	150	CO
1º	Video Game Design: Script and Storyboarding	150	CO
1º	Consoles and Devices for Videogames	150	CO
1º	Modeling	150	CO
1º	Video Game Engines	150	CO
1º	Human-Computer Interaction	150	CO
1º	Video Games and Simulation for Research and Education	150	CO
1º	Multiplayer Networks and Systems	150	CO

Tere Guevara Navarro
Dean

tech technological university

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

tech technological university

Hybrid Professional Master's Degree

Video Game Narrative

Modality: **Hybrid (Online + Internship)**
Duration: **12 months.**
Certificate: **TECH Technological University**
Teaching Hours: **1,620 hours.**

Hybrid Professional Master's Degree

Video Game Narrative

tech technological university