

# Professional Master's Degree Video Games



## Professional Master's Degree Video Games

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

Website: [www.techtitute.com/us/videogames/professional-master-degree/master-video-games](http://www.techtitute.com/us/videogames/professional-master-degree/master-video-games)

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# 01

# Introduction

Today, it is difficult to imagine a world without Video Games. They are the most popular form of entertainment worldwide. Millions of gamers, of a variety of ages, are playing some of their favorite Video Games at this very moment; in every home there is at least one person who plays regularly, and this trend is increasing. This has brought an increasing demand for Video Games of all kinds, so the design companies need qualified experts who can continue to develop their products. This program offers the opportunity for students to become specialists, so that they can fulfill their dreams by designing Video Games like the ones they have enjoyed throughout their lives.





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*You've always dreamt of designing Video Games:  
this program gives you the opportunity to make  
that dream come true"*

Video games are the ultimate form of 21st century entertainment. Millions of people of different ages and from all over the world play different video games simultaneously and in different modalities: online, offline, free distribution, free or paid with Pay for Play options, from fixed or portable consoles... There is a vast number of possibilities when it comes to gaming because there are always large groups of people who continually ask for the release of new titles of different kinds, each of which is adapted to a particular gamer sector.

However, there are not only differences in terms of the media and modality used by Video Games, but also in terms of the content itself, as there are dozens of genres, each with its own particularities, that are trying to carve a niche in the market: strategy games, first and third person shooters, RPGs, sports and car simulators, small board and card games converted into digital products, independent or big-budget games, etc.; hence, countless options to satisfy the demands of each user group.

Because of this, new release titles are required all the time, and both large and small Video Game companies need experts in different fields of the industry to continue producing quality and commercially successful products. This Master's Degree in Video Games is the answer to that need, as it teaches students everything they need to become Video Game designers and be able to cover every aspect of its development for different platforms, formats and genres.

This program covers all the relevant specializations in Video Game production, and will turn students into specialists either in Art, Animation, Script, Sound Design or Music Composition; as graduates of this Professional Master's Degree, they will be able to pursue any of these professions and undertake video game projects from their initial conception through to their launch.

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

- ◆ Learning through Video Game Design case studies
- ◆ The general and specific vision of its contents, which makes program graduates experts in specific aspects but also provides them with a global vision of the sector
- ◆ Practical exercises which will test students' progress so that learning can be assimilated more effectively
- ◆ Special emphasis on study of all the tools and services available, so that students can design and develop Video Games in a comprehensive way
- ◆ An expert and experienced teaching staff who know the Video Game industry in detail
- ◆ Content that is accessible from any fixed or portable device with an Internet connection



*You may very well have the idea for the next worldwide video game and see your dream through with this Professional Master's Degree"*

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*Be the next Hideo Kojima: enroll and develop all your ideas thanks to the skills you will acquire with this Professional Master's Degree"*

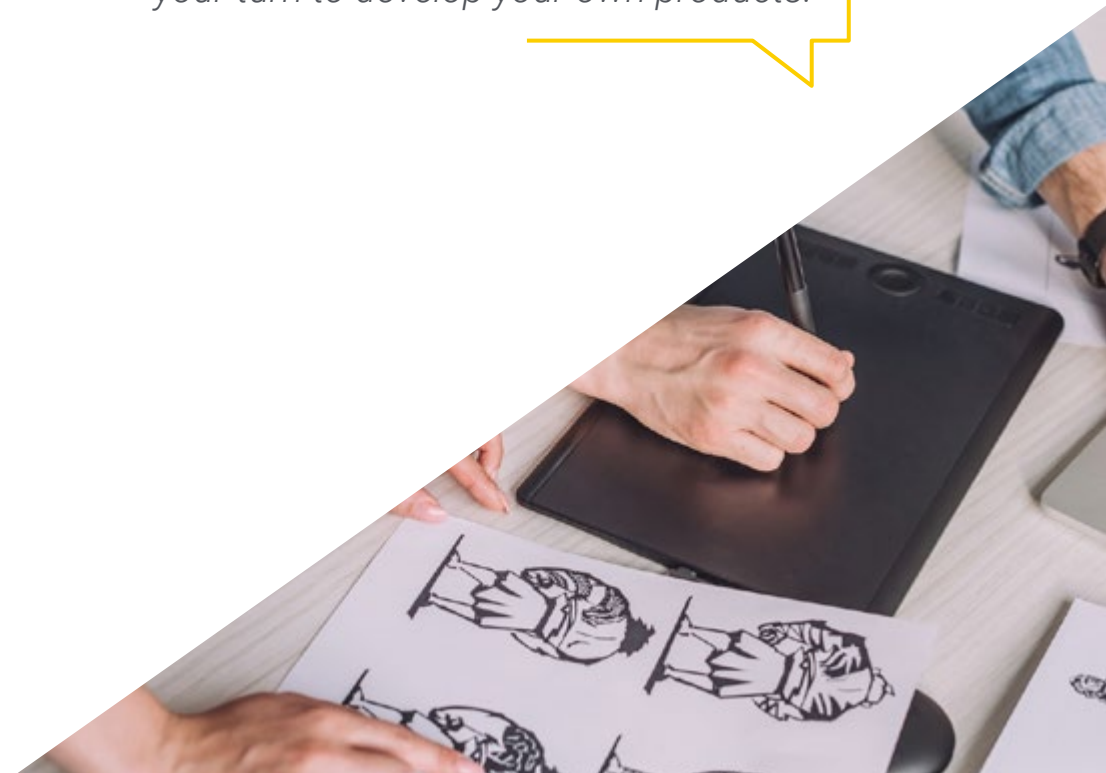
The program's teaching staff includes professionals from the sector who bring their work experience to this course, as well as renowned specialists from leading societies and prestigious universities.

The multimedia content, developed with the latest educational technology, will provide the professional with situated and contextual learning, i.e., a simulated environment that will provide immersion training 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. This will be done with the help of an innovative system of interactive videos made by renowned experts.

*TECH trusts in your talent, that's why we give you all the tools to show it by designing the Video Game of your dreams.*

*You have enjoyed hundreds of hours with your favorite Video Games, now it's your turn to develop your own products.*



# 02 Objectives

With this Professional Master's Degree, students will be able to occupy different positions in the Video Game Design process, from art design and animation, narrative and scripting aspects, through to music composition and sound design. This program aims to provide its graduates with specialized knowledge in each of these areas, which will bring them the expertise that is highly valued by design and development companies in the sector.





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*Want to design the most famous games in the world? Want to design critically acclaimed indie games? In either case, this program will help you achieve your goals"*



## General Objectives

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- ◆ Know the different genres of Video Games, their features and the concept of gameplay, in order to apply them into Video Game analysis, creation and design
- ◆ Study Video Game production process in depth, as well as Scrum methodology for project production
- ◆ Learn the fundamentals of Video Game Design and the theoretical knowledge that a video game designer should know
- ◆ Generate ideas and create entertaining stories, plots and scripts for Video Games
- ◆ Know the theoretical and practical foundations of the artistic design of a video game
- ◆ In-depth knowledge of 2D and 3D animation, as well as the key elements of object and character animation
- ◆ Know how to perform 3D modelling tasks
- ◆ Perform professional programming with the Unity 3D engine
- ◆ Be able to create an independent digital entertainment startup





## Specific Objectives

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### Module 1. Video Game Design

- ◆ Understand the theory of Video Game Design
- ◆ In-depth study of the elements of design and gamification
- ◆ Learn about the types of players, their motivations and characteristics
- ◆ Learn about game mechanics, MDA and other Video 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. Narrative and Script Design**

- ◆ Understand general narrative and video game narrative
- ◆ Understand the complex elements of narrative such as characters, purpose, and setting
- ◆ In-depth understanding of narrative structures and complex application in Video Game Design
- ◆ Learn the latest about the universe and settings such as fantasy or science-fiction and their characteristics in plots
- ◆ Possess thorough and working knowledge of a storyline
- ◆ Learn about the creation of main and secondary characters
- ◆ In-depth study of the structuring of a video game script and the difference between video games and cinema
- ◆ Learn about the script creation process, its characteristics and elements

### **Module 4. Art in Video Games**

- ◆ Understand artistic theory, color theory, character and environmental theory
- ◆ Create complex sketches and Concept Art
- ◆ Explore the 2D art of characters, objects and environments with Photoshop programs
- ◆ Create 3D objects, characters and environments with 3D Studio Max and Mudbox
- ◆ Learn about the artistic styles of characters and scenery, as well as the types of settings and their representation in drawings

### **Module 5. Programming**

- ◆ Handle the most widely used engine in Video Game development: Unity 3D Engine
- ◆ Study Unity programming and master the program 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
- ◆ Study 3D Studio Max and Mudbox interfaces for modeling objects and characters
- ◆ Understand the theory of 3D modeling
- ◆ Know how to extract textures
- ◆ Learn how 3D cameras work

### **Module 7. Advanced Programming**

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

### **Module 9. Sound & Music Design**

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

### **Module 10. Production and Management**

- ◆ Understand the production of a video game and its different stages
- ◆ Learn the types of producers
- ◆ Know Project Management for video game development
- ◆ Use different tools for production
- ◆ Coordinate teams and project management

# 03 Skills

After passing the evaluations of this Professional Master's Degree in Video Games, students will have the skills they need to perform different tasks that make up the design of a video game, from the earliest to the final stages of production. This way, students will have attained the knowledge they require to become valuable members of the companies they work for, as they will be able to perform in a variety of design activities, and at an optimal level.





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*You have the ideas and the ambition: TECH gives you the skills to achieve your goals"*



## General Skills

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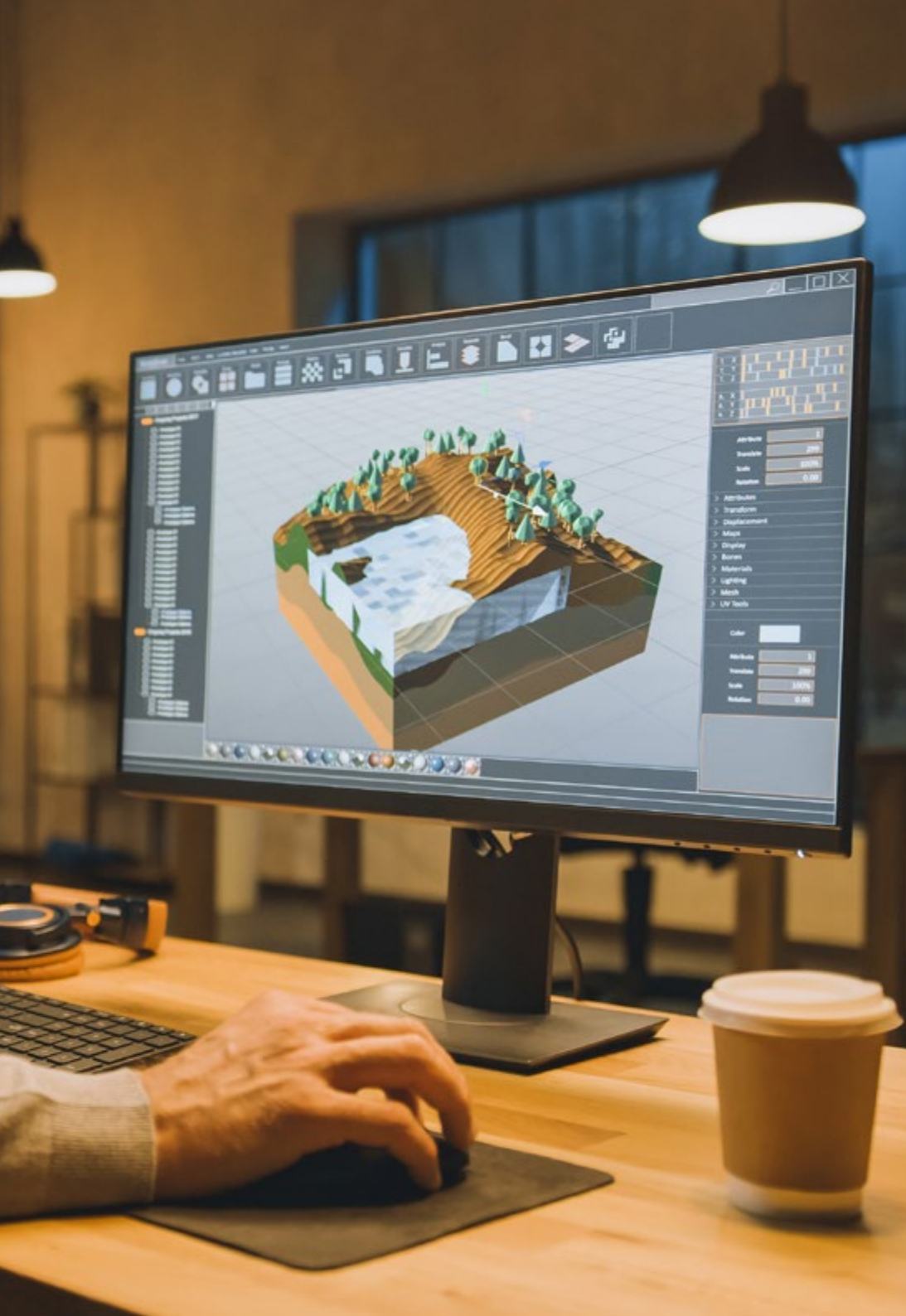
- ◆ Design all phases of a video game, from the initial idea to the final launch
- ◆ Specialize as a Video Game designer to become an expert 'Game Designer'
- ◆ Study all aspects of development in depth, from initial architecture, programming of the player character, implementation of animations, as well as the creation of artificial intelligence for enemy and non-player characters
- ◆ Obtain an overall vision of the project and be able to provide solutions to the different problems and challenges that arise during the design of a video game



*Acquire the necessary you need to design the video game of your dreams"*







## Specific Skills

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- ◆ Become familiar with the software that is required to become a professional in Video Game Design and Development
- ◆ Understand Player Experience and analyze Video Game Gameplay
- ◆ Understand the entire theoretical and practical procedure of a Concept Artist's creation process
- ◆ Understand the theoretical and practical procedures 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
- ◆ Carry out 2D and 3D Video Game animation
- ◆ Apply 2D and 3D Video Game programming for different platforms
- ◆ Carry out musical composition and sound design

# 04

# Course Management

The teaching staff of this Professional Master's Degree in Video Games are experts in the field who will provide all their knowledge, so that students can learn everything they need to become great Video Game designers. The teaching staff has been carefully chosen, so that each professor, a specialist in a particular field, can transmit the best contents to students, who can then apply this knowledge in their own design projects.





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*The best experts teach you how to be a great Video Game designer”*

## Management



### Mr. Blasco Vilches, Luis Felipe

- Narrative designer at Stage Clear Studios, developing a confidential product
- Narrative designer at HeYou Games in the "Youturbo" project
- E-learning and serious games product designer and scriptwriter for Telefónica Learning Services, TAK and Bizpills
- Level designer at Indigo for the "Meatball Marathon" project
- Screenwriting teacher in the Master's Degree in Video Game Creation at the University of Malaga
- Lecturer in Video Game Narrative Design and Production at the TAI Film Department, Madrid
- Narrative Design and Script Workshops teacher, and in the Video Game Design Degree at ESCAV, Granada
- Degree in Hispanic Studies from the University of Granada, Spain
- Master's Degree in Creativity and Television Screenwriting, Rey Juan Carlos University



## Professors

### Mr. Carrión, Rafael

- ◆ Sound designer and Unity3D audio programmer
- ◆ Degree in Industrial Engineering Polytechnic University of Valencia 2018
- ◆ Master's Degree in Video Game Programming Open University, Catalunya 2021
- ◆ Course in Audio Production for Games using WWISE Berklee 2019
- ◆ Audio programmer at Women in Games Present

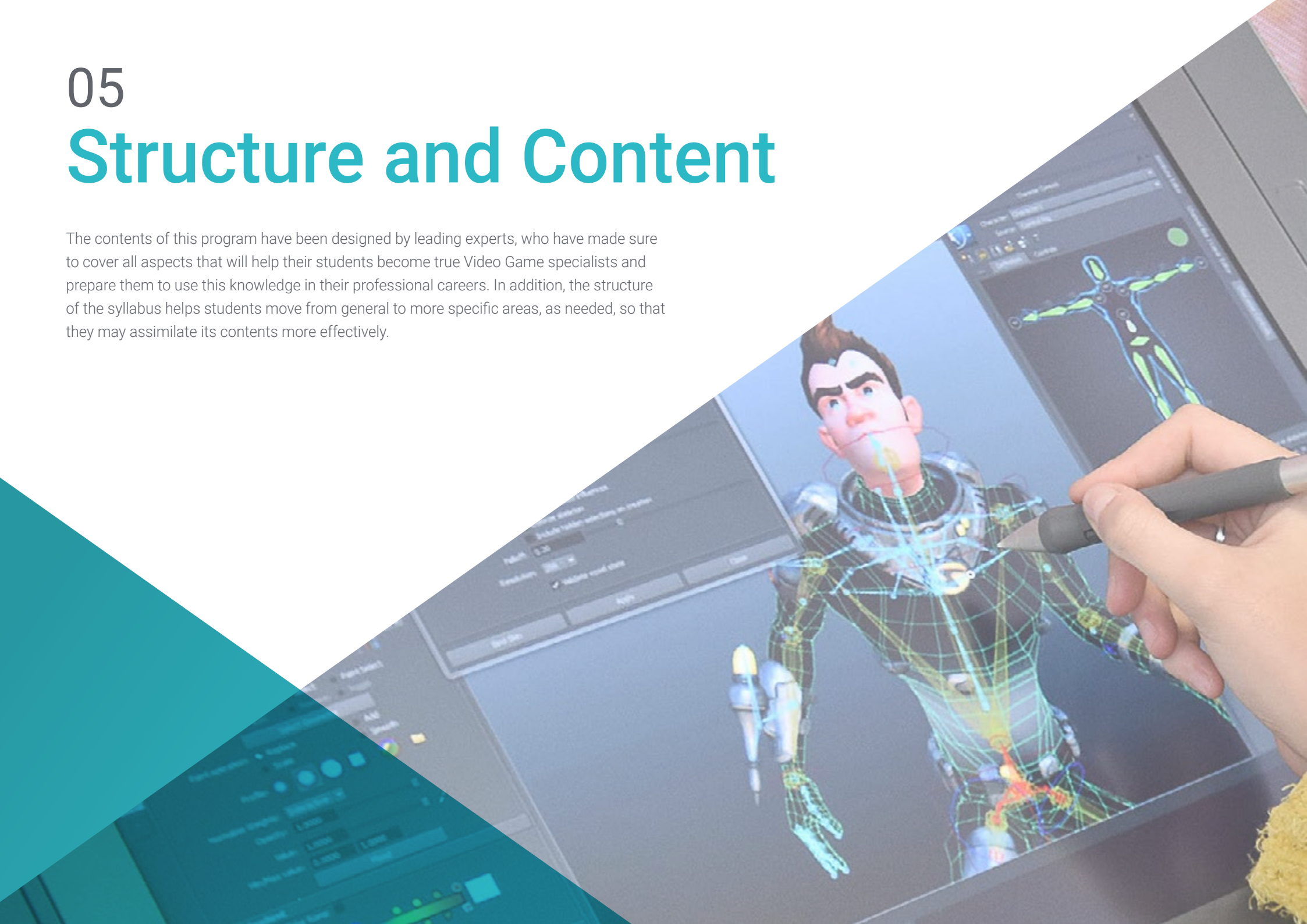
### Ms. Molas, Alba

- ◆ Video Game Design
- ◆ Graduate in Film and Media Film School of Catalunya 2015
- ◆ Student of 3D animation, Video Games and Interactive Environments. Currnet – CEV 2020
- ◆ Specialized training in Children's Animation Scriptwriting. Showrunners BCN 2018
- ◆ Member of the association Women in Games
- ◆ Member of the FemDevs Association

# 05

## Structure and Content

The contents of this program have been designed by leading experts, who have made sure to cover all aspects that will help their students become true Video Game specialists and prepare them to use this knowledge in their professional careers. In addition, the structure of the syllabus helps students move from general to more specific areas, as needed, so that they may assimilate its contents more effectively.





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*The most comprehensive program is waiting for you to become the most in-demand Video Game Designer"*

## 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. Design Elements
  - 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. Aesthetics
- 1.8. Video Game Analysis
  - 1.8.1. Gameplay Analysis
  - 1.8.2. Artistic Analysis
  - 1.8.3. Style Analysis

- 1.9. Video Level Design
  - 1.9.1. Designing Interior Levels
  - 1.9.2. Designing Exterior 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. Document Structure
  - 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 NPCs
- 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
  - 2.9.1. Interface
  - 2.9.2. 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. Non-Linear Narrative: Blocks
  - 3.3.2. Environmental Narratives and Subplots
  - 3.3.3. Other Structure Types: 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
  - 3.6.1. Round and Flat
  - 3.6.2. Character Evolution
  - 3.6.3. Secondary Characters
- 3.7. Characters
  - 3.7.1. Psychology
  - 3.7.2. Motivation
  - 3.7.3. Skills
- 3.8. Types of Dialogue
  - 3.8.1. Internal
  - 3.8.2. External
  - 3.8.3. Others
- 3.9. Script: Elements
  - 3.9.1. Script Characteristics
  - 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. Detail
- 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. Detail
- 4.6. Video Game Characters and Elements
  - 4.6.1. Character Creation
  - 4.6.2. Video Game Environment Creation
  - 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: Creating Ground 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: Attacking Skills
  - 5.4.2. Programming: Jumping Skills
  - 5.4.3. Programming: Shooting Skills

- 5.5. Gameplay II
  - 5.5.1. Programming: Weapons
  - 5.5.2. Programming Items
  - 5.5.3. Programming Checkpoint
- 5.6. AI: 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. Bombs
- 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
- 5.10. Text and Dialogue
  - 5.10.1. Creation of Text
  - 5.10.2. Creation of Dialogue
  - 5.10.3. Response Selection

## Module 6. 3D Art

- 6.1. Advanced Art
  - 6.1.1. From Concept Art to 3D
  - 6.1.2. 3D Modeling Principles
  - 6.1.3. Types of Modeling: Organic/Inorganic
- 6.2. 3D Max Interface
  - 6.2.1. 3D Software
  - 6.2.2. Basic Interface
  - 6.2.3. Organization of Scenes

- 6.3. Inorganic Modeling
  - 6.3.1. Modeling with Primitives and Deformers
  - 6.3.2. Editable Polygon Modeling
  - 6.3.3. Graphite Modeling
- 6.4. Organic Model
  - 6.4.1. Character Modeling I
  - 6.4.2. Character Modeling II
  - 6.4.3. Character Modeling III
- 6.5. UV Creation
  - 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. Texture Atlas Creation
  - 6.6.2. Hierarchies and Bone Creation
  - 6.6.3. Application of a Skeleton
- 6.7. Animation Systems
  - 6.7.1. Bipet
  - 6.7.2. CAT
  - 6.7.3. Proper 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. Exporting Models
  - 6.10.3. Importing Animations

## 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. NPCs
  - 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. Platform Effector I
  - 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. Arches
  - 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 animationRigging
  - 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 Movement I
  - 8.9.2. Object Movement II
  - 8.9.3. Object Movement III
- 8.10. Kinematics
  - 8.10.1. Creation of a 2D Kinematic: Basic Introduction
  - 8.10.2. Creation of a 2D Kinematic: Movements in the Environment
  - 8.10.3. Creation of a 2D Kinematic: Export

## Module 9. Sound & Music Design I

- 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. PreMix
- 9.5. Postproduction
  - 9.5.1. Postproduction
  - 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. Loop Creation
- 9.9. Adaptive Systems
  - 9.9.1. Horizontal Resequencing
  - 9.9.2. Vertical Remix
  - 9.9.3. Stingers 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. Preproduction
  - 10.5.2. Production
  - 10.5.3. Postproduction
- 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

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*You won't find a better program to help you become the best game designer”*

# 06 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.



# 07 Certificate

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





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*Successfully complete this program  
and receive your university degree  
without travel or laborious paperwork”*

This program will allow you to obtain your **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.

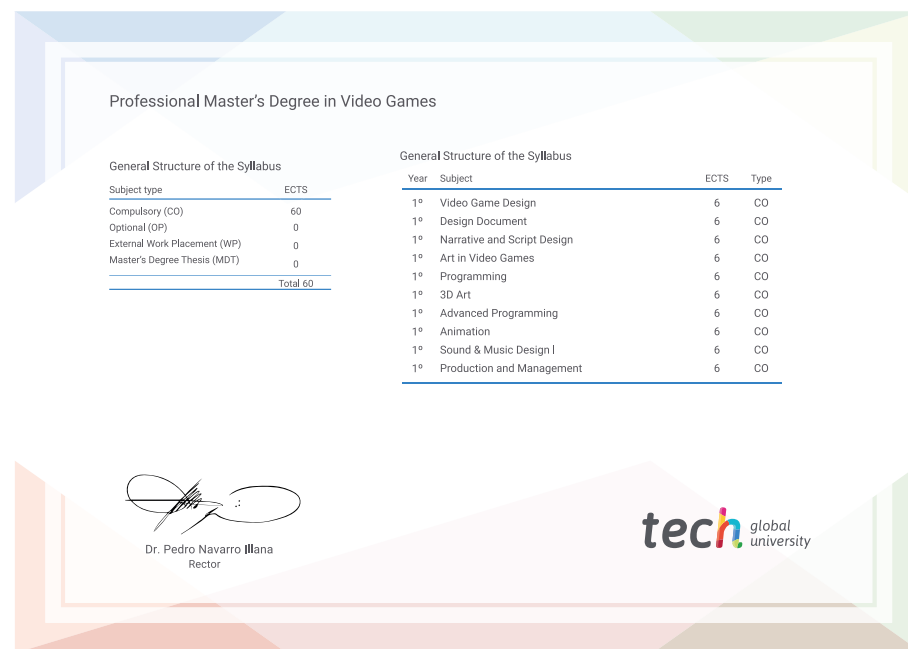
This **TECH Global University** title is a European program of continuing education and professional updating that guarantees the acquisition of competencies in its area of knowledge, providing a high curricular value to the student who completes the program.

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

Modality: **online**

Duration: **12 months**

Accreditation: **60 ECTS**



\*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.

future

health confidence people

education information tutors

guarantee accreditation teaching

institutions technology learning

community commitment

personalized service innovation

knowledge present

online training

development language

virtual classroom

**tech** global  
university

## Professional Master's Degree

### Video Games

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

# Professional Master's Degree Video Games

