

# 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/design/professional-master-degree/master-video-games](http://www.techtitute.com/us/design/professional-master-degree/master-video-games)

# Index

01

Introduction

---

*p. 4*

02

Objectives

---

*p. 8*

03

Skills

---

*p. 14*

04

Course Management

---

*p. 18*

05

Structure and Content

---

*p. 22*

06

Methodology

---

*p. 32*

07

Certificate

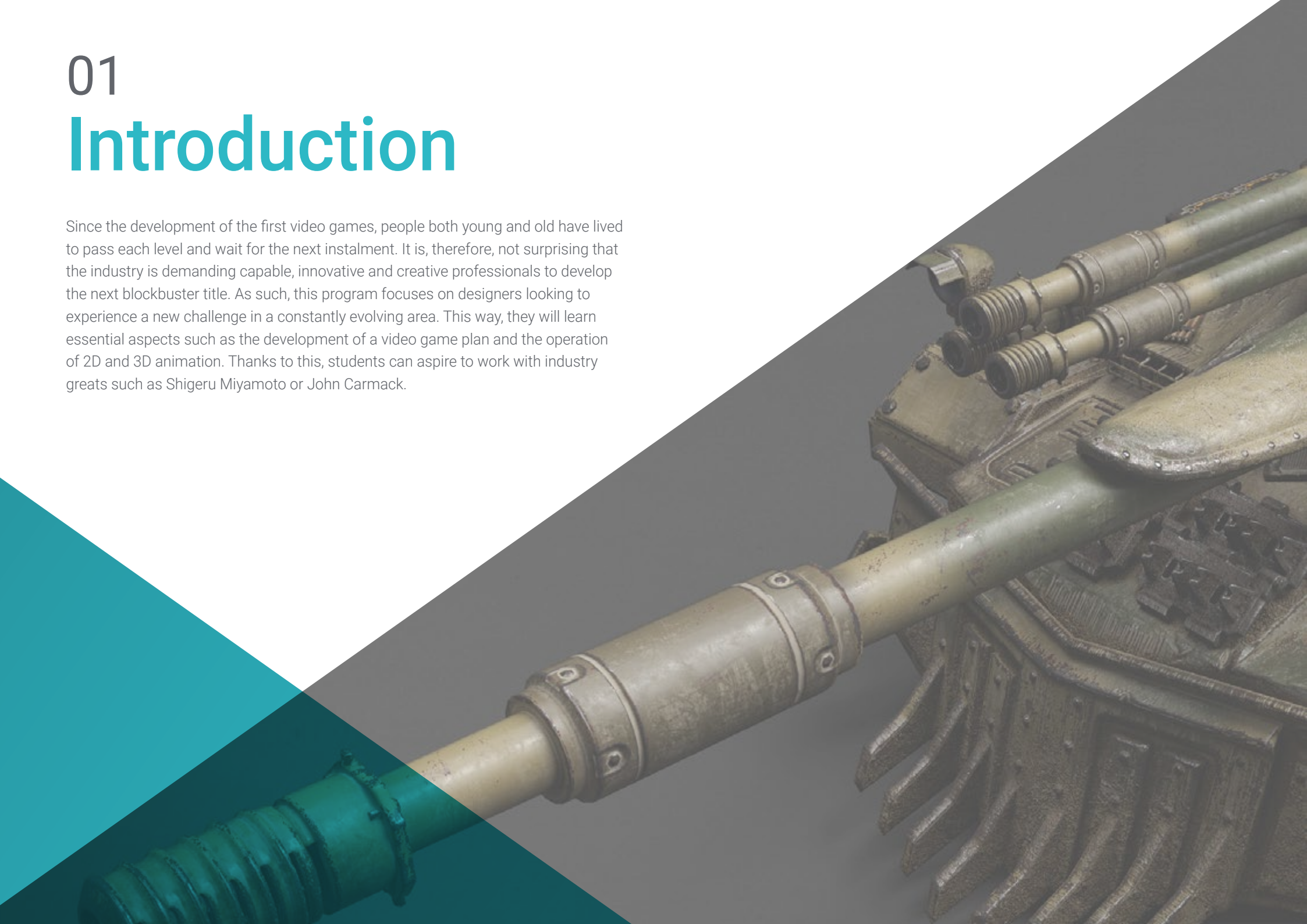
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# 01

# Introduction

Since the development of the first video games, people both young and old have lived to pass each level and wait for the next instalment. It is, therefore, not surprising that the industry is demanding capable, innovative and creative professionals to develop the next blockbuster title. As such, this program focuses on designers looking to experience a new challenge in a constantly evolving area. This way, they will learn essential aspects such as the development of a video game plan and the operation of 2D and 3D animation. Thanks to this, students can aspire to work with industry greats such as Shigeru Miyamoto or John Carmack.





“

*Do you want to turn around your career as a designer? Start this program focused on video game development to become a big player in the industry"*

Video games have become a multi-billion dollar industry that, according to expert estimates, is growing steadily. From the invention of "Tennis for Two" in 1958 to the present day with games like Gears of War or League of Legends, we have come a long way. The constant evolution of consoles must also be added to this, which are equipped to reproduce more realistic graphics and support greater narratives. As a result, design teams have an increasingly difficult job: To provide the audience with a novel, creative and surprising title.

Similarly, large companies are looking for professionals who are passionate about this world, who know the essential aspects that make a video game good and what needs to be improved to ensure an excellent design. There are two ways to achieve this: The first is to play as many video games as you can, as this way you can get a vision of the goal you want to achieve.

The second is to receive academic training in the field to know the technical aspects and develop a perfectionist vision of what a successful video game should be. That is why this Professional Master's Degree in Video Games will provide students with all the skills that will lead them to work with great exponents of the sector, such as Shigeru Miyamoto. Therefore, the program will begin by covering the basic aspects of video game design, delving into elements such as gamification and game mechanics.

In contrast, a good video game is nothing if it does not have an engaging and emotional story. Accordingly, an entire module will be devoted to understanding and crafting a narrative that involves character development, character goals, setting and all the features that help in the writing of an exceptional storyline. Aspects related to animation, sound and programming will also be taken into account.

All the content of the program is designed to be carried out online, giving the student the opportunity to choose the best time to access the virtual classroom. In short, this program covers all the content that designers need to handle to move up the career ladder. This allows them to pursue different career options, such as entering an international development company or starting up an independent project.

This **Professional Master's Degree in Video Games** contains the definitive educational program, thanks to its innovative contents, which will turn students into specialists who are ready to work in the field. Its most notable features are:

- ◆ Learning applied to 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 an exhaustive knowledge of all the tools and services available, in order to design and develop video games in a comprehensive way
- ◆ An expert and experienced teaching staff who know the video game industry to perfection
- ◆ Content that is accessible from any fixed or portable device with an Internet connection



*Big companies like Sony and Activision Blizzard are looking for designers who are passionate about the world of video games. You can be part of their team after completing this program"*

“ *TECH will help you to train professionally as a video game designer, through a program that will award you with a direct qualification*”

The program's teaching staff includes professionals from sector who contribute their work experience to this training program, 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. For this purpose, the student will be assisted by an innovative interactive video system created by renowned and experienced experts.

*Design an epic story of the stature of Final Fantasy by enrolling in this Professional Master's Degree.*

*Learn all the fundamentals of video game design and start planning the next blockbuster title.*



# 02 Objectives

This Professional Master's Degree in Video Games for designers aims to provide students with the skills they need to understand this vast world. They will, therefore, not only acquire empirical knowledge in this field, but develop their creativity, explore their skills and move towards excellence. Additionally, it has a direct qualification, i.e., it will not require a final project to access new professional opportunities in the sector, either in an international company alongside the greatest exponents of the area, or developing your own project that becomes a worldwide success.







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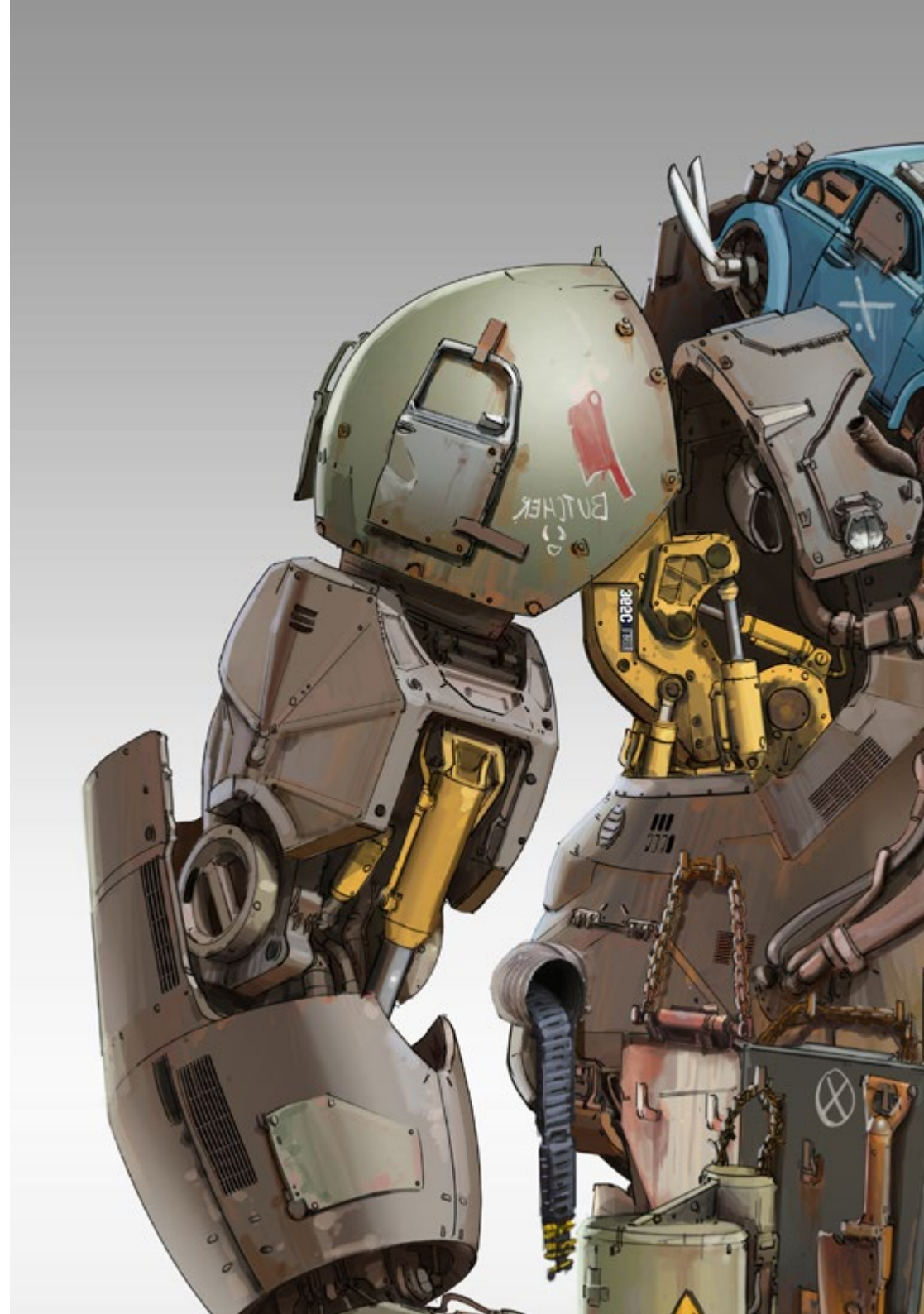
*Learn about the different programs used for 3D modeling and create realistic scenes for your video games”*

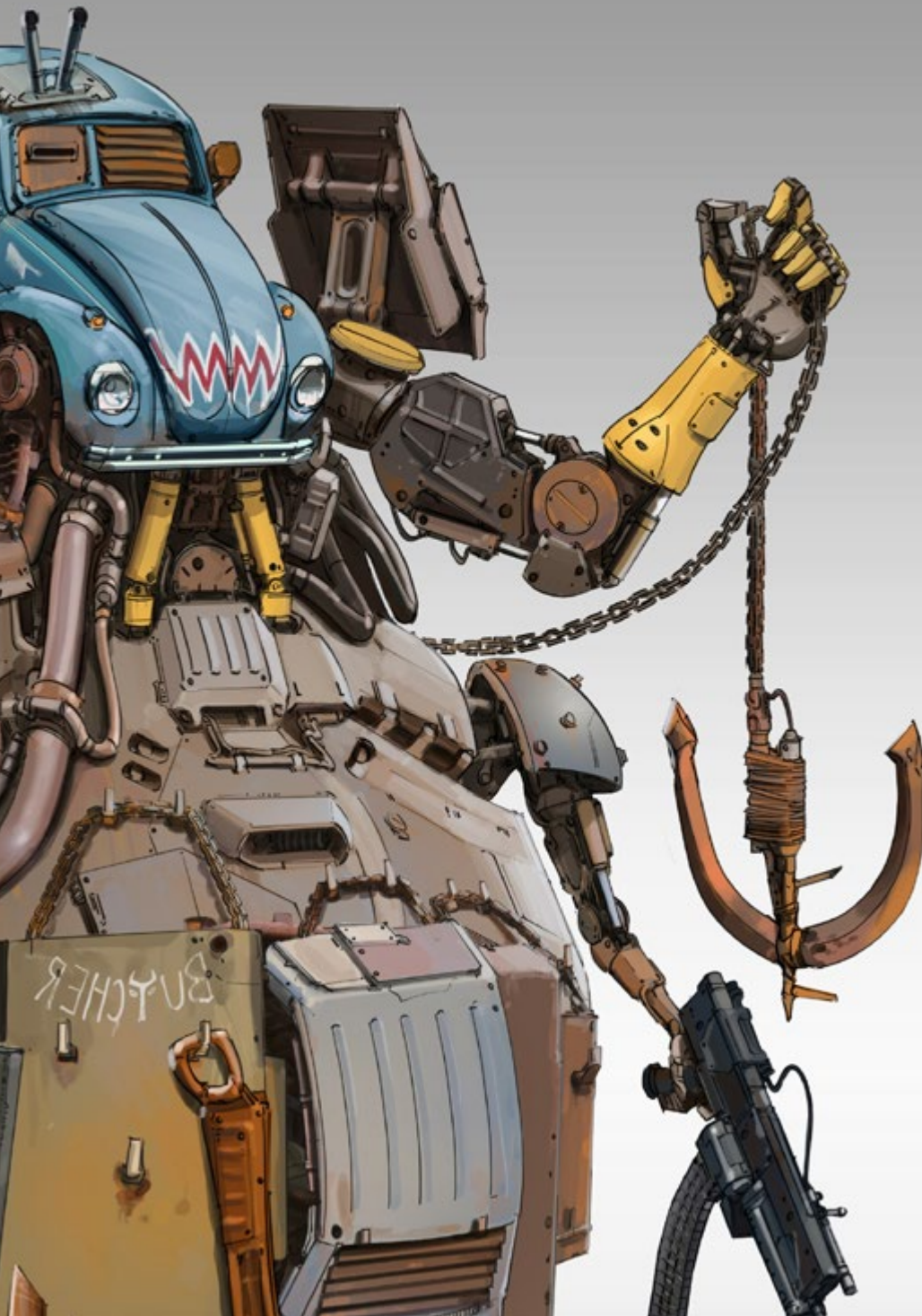


## General Objectives

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- ◆ Know the different genres of video games, the concept of gameplay and features in order to apply them in the analysis of video games and in the creation of the design of the video game
- ◆ Deepen understanding of the production of video games and in the 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 game design theories
- ◆ Learn the critical foundations for video game analysis with theory and examples
- ◆ Learn about game level design, how to create puzzles within these levels and how to place the design elements in the environment

### Module 2. Design Documentation

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

### **Module 3. Narrative and Script Design**

- ◆ Understand general narrative and 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 news about the universe and settings such as fantasy or science fiction and their characteristics in the plots
- ◆ Have a 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 the process of creating a script and the characteristics and elements for its creation

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

- ◆ Understand artistic theory, color theory, character theory and environment
- ◆ 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
- ◆ Know 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 with C# 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
- ◆ Understand the 3D Studio Max and Mudbox program interface 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
- ◆ Conocer el Rigging de 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 the 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

The structure of this program is designed in such a way that the designer is able to identify and solve any problems related to the development of a video game. Therefore, students will acquire creative skills to visualize the problem from different perspectives. At the same time, critical thinking will be encouraged, which will allow them to differentiate themselves from the rest, presenting innovative and fresh ideas. All these aspects are highly demanded by any company that develops video games.





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*Be creative and critical in order to succeed  
in any video game design project”*



## 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
- ◆ Deepen understanding of all aspects of development, from the initial architecture, the programming of the player character, the implementation of animations, and 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 in the design of a video game

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*All the skills you will acquire in this program will make you a great video game designer”*







## Specific Skills

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- ◆ Become familiar with the software necessary to be a professional in the design and development of video games
- ◆ 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 procedure of a 2D artist
- ◆ Know how to model and texture 3D objects and characters
- ◆ Have a broad knowledge of 2D and 3D video game programming
- ◆ Perform 2D and 3D animation for video games and apply 2D and 3D video game programming for different platforms
- ◆ Carry out musical composition and sound design

# 04

# Course Management

The teaching staff in charge of delivering the contents of the degree is made up of high level professionals in the sector. They have dedicated their careers to programming, designing and animating different projects, and hold studies that endorse their skills and experience. In addition, many of them have become pioneers in the sector, founding and representing their own video game companies. Therefore, there are no professionals better prepared to help students achieve excellence.





“

*A high level teaching team will be responsible for helping you achieve your professional goals as a 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

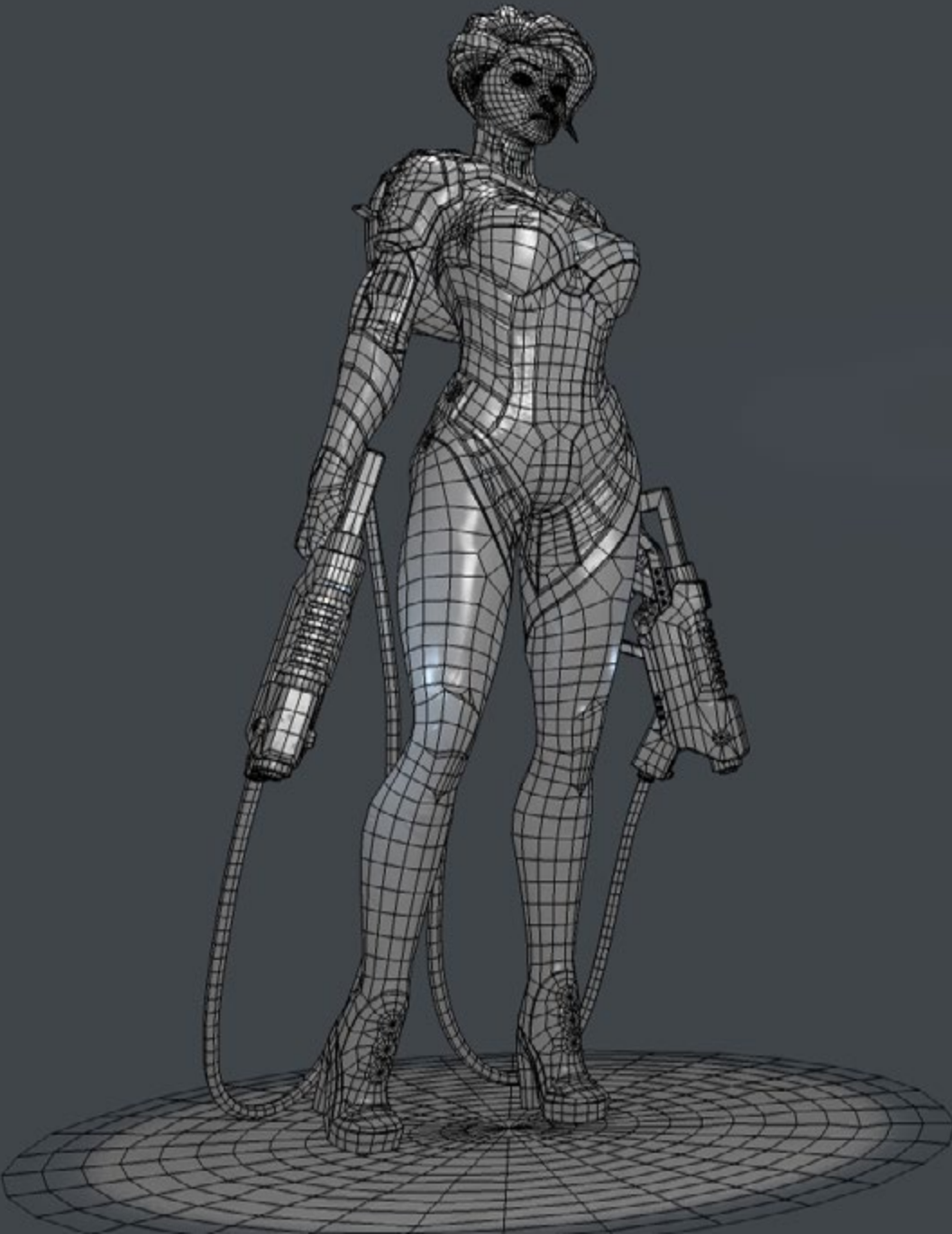
## Professors

### 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

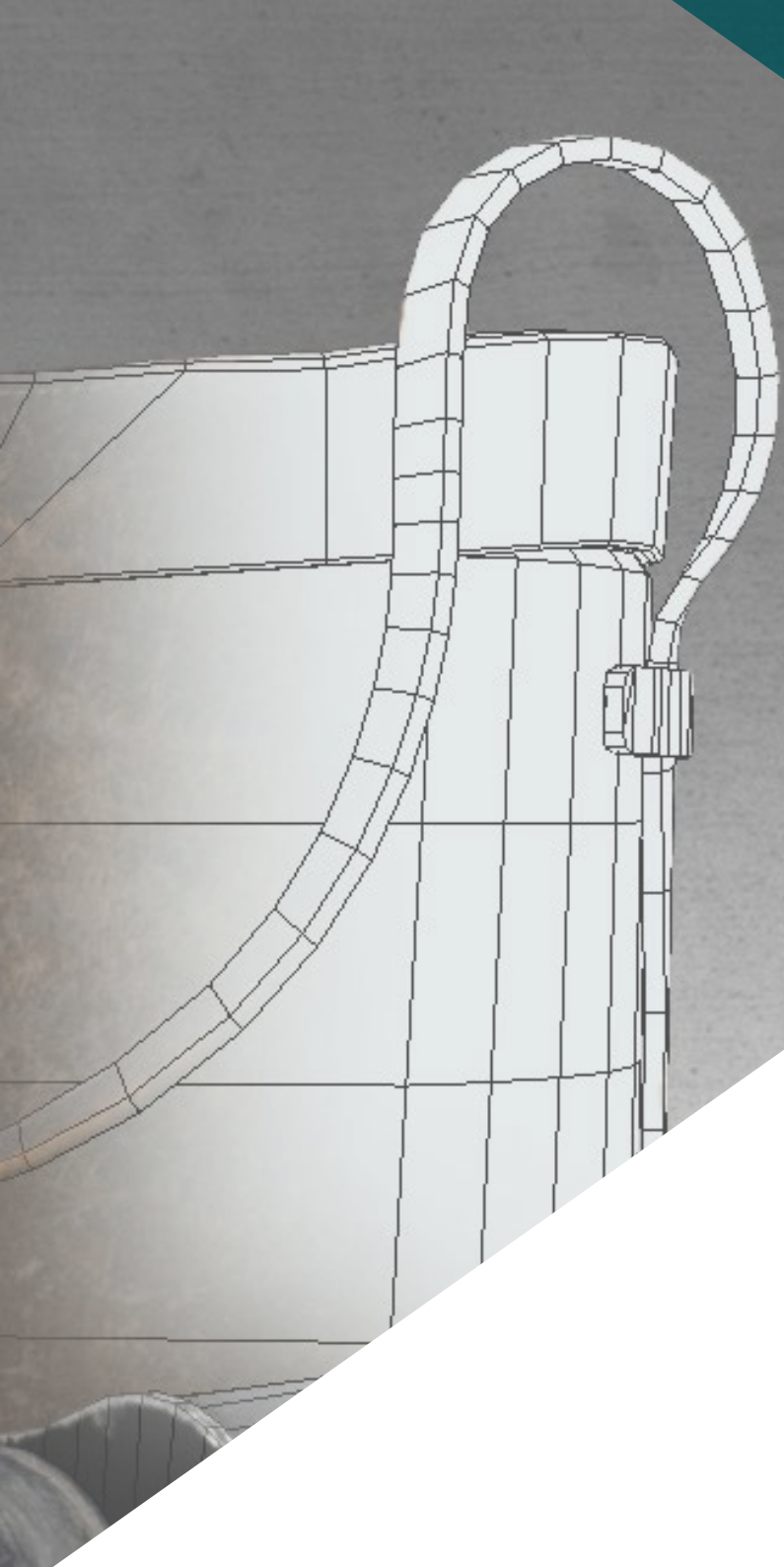


# 05

## Structure and Content

The academic contents designed for this Professional Master's Degree in Video Games have been designed by experts who are familiar with the creative and critical demands of large companies. For this reason, they have put all their interest in creating a syllabus that fully complies with them. Thanks to this, designers will become leading specialists in the field, increasing their chances of joining an international development team or starting their own project.





“

*Do you want to be the best video game designer? This program will help you achieve excellence, all you have to do is sign up to get started"*

## 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. Esthetics
- 1.8. Video Game Analysis
  - 1.8.1. Analysis of Gameplay
  - 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. Structure of the Document
  - 2.1.1. Design Document
  - 2.1.2. Structure A
  - 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



- 2.6. Levels and Progression
  - 2.6.1. Levels
  - 2.6.2. Journey
  - 2.6.3. Progression
- 2.7. Items, Skills and Elements
  - 2.7.1. Items
  - 2.7.2. Skills
  - 2.7.3. Components
- 2.8. Achievements
  - 2.8.1. Medals
  - 2.8.2. Secret Characters
  - 2.8.3. Extra Points
- 2.9. HUD and Interface
  - 2.9.1. HUD
  - 2.9.2. Interface
  - 2.9.3. Structure
- 2.10. Saved and Attached
  - 2.10.1. Saved
  - 2.10.2. Annexed Information
  - 2.10.3. Final Details

### Module 3. Narrative and Script Design

- 3.1. Video Game Narrative
  - 3.1.1. Archetypes
  - 3.1.2. Hero's Journey
  - 3.1.3. Monomyth Structure
- 3.2. Elements of Narrative
  - 3.2.1. Linear
  - 3.2.2. Ramified
  - 3.2.3. Funnels

3



- 3.3. 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. Plantering 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. Characteristic of the Script
  - 3.9.2. Scenes and Sequences
  - 3.9.3. Elements in a Script
- 3.10. Script: Writing
  - 3.10.1. Structure
  - 3.10.2. Style
  - 3.10.3. Other Details

## Module 4. Art in Video Games

- 4.1. Art
  - 4.1.1. Artistic Foundations
  - 4.1.2. Color Theory
  - 4.1.3. Software
- 4.2. Concept Art
  - 4.2.1. Sketch
  - 4.2.2. Concept Art
  - 4.2.3. Details
- 4.3. Video Game Scenarios
  - 4.3.1. Non-Modular Scenarios
  - 4.3.2. Modular Scenarios
  - 4.3.3. Props and Environment Objects
- 4.4. Ambience
  - 4.4.1. Fantasy
  - 4.4.2. Realistic
  - 4.4.3. Science Fiction
- 4.5. Props and Objects
  - 4.5.1. Organic
  - 4.5.2. Inorganic
  - 4.5.3. Details
- 4.6. Video Game Characters and Elements
  - 4.6.1. Character Creation
  - 4.6.2. Creation of Video Game Environments
  - 4.6.3. Creation of Objects and Props
- 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 a 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. Creation of UVs
  - 6.5.1. Basic Materials and Maps
  - 6.5.2. Unwrapping and Texture Projections
  - 6.5.3. Retopology
- 6.6. Advanced 3D
  - 6.6.1. 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. NPC
  - 7.4.3. Enemies
- 7.5. Physical
  - 7.5.1. Physical Materials
  - 7.5.2. Hinge Joint/Spring 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. Pre-Mix
- 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. Creation of Loops
- 9.9. Adaptive Systems
  - 9.9.1. Horizontal Re-Sequencing
  - 9.9.2. Vertical Remix
  - 9.9.3. Stinger Transitions
- 9.10. Integration
  - 9.10.1. 3D Unity
  - 9.10.2. FMOD
  - 9.10.3. Master Audio

## Module 10. Production and Management

- 10.1. Production
  - 10.1.1. The Production Process
  - 10.1.2. Production I
  - 10.1.3. Production II
- 10.2. Phases of Video Game Development
  - 10.2.1. Conception Phase
  - 10.2.2. Design Phase
  - 10.2.3. Planning Phase
- 10.3. Phases of Video Game Development II
  - 10.3.1. Production Phase
  - 10.3.2. Testing Phase
  - 10.3.3. Distribution and Marketing Phase
- 10.4. Production and Management
  - 10.4.1. CEO/ General Manager
  - 10.4.2. Chief Financial Officer
  - 10.4.3. Sales Manager



- 10.5. The Production Process
  - 10.5.1. 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

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

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

## Relearning Methodology

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

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

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

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

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



In our program, learning is not a linear process, but rather a spiral (learn, unlearn, forget, and re-learn). Therefore, we combine each of these elements concentrically.

With this methodology we have trained more than 650,000 university graduates with unprecedented success in fields as diverse as biochemistry, genetics, surgery, international law, management skills, sports science, philosophy, law, engineering, journalism, history, markets, and financial instruments. All this in a highly demanding environment, where the students have a strong socio-economic profile and an average age of 43.5 years.

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

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

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



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



### Study Material

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

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



### Classes

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

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



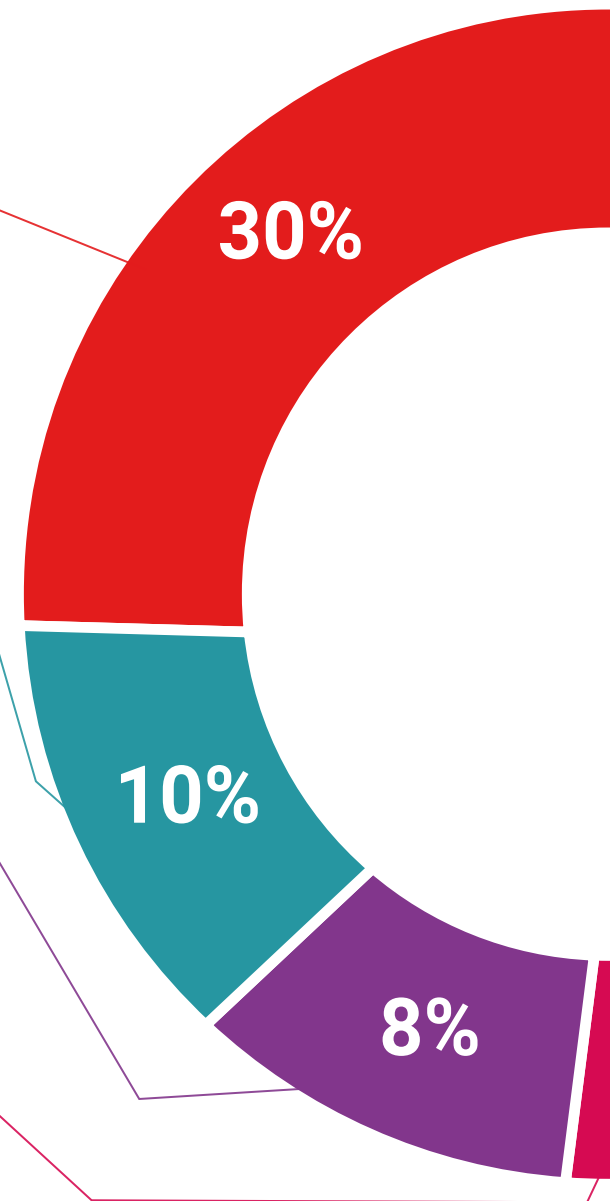
### Practising Skills and Abilities

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



### Additional Reading

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





**Case Studies**

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



**Interactive Summaries**

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

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



**Testing & Retesting**

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



# 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.





“

*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.

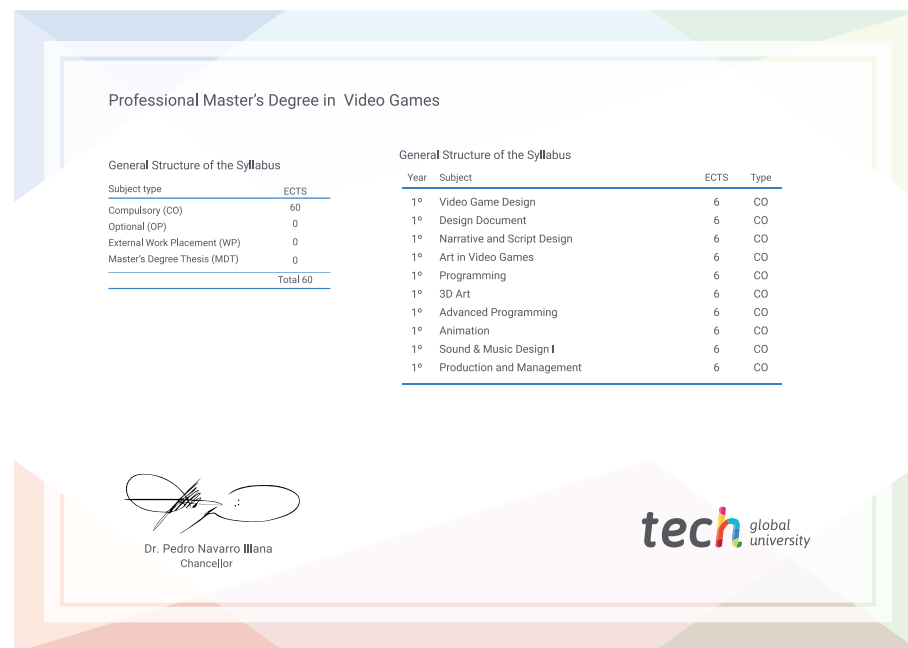
This **TECH Global University** title is a European program of continuing education and professional updating that guarantees the acquisition of competencies in its area of knowledge, providing a high curricular value to the student who completes the program.

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.



## 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

