

Postgraduate Diploma Art and Animation in Video Games





Postgraduate Diploma Art and Animation in Video Games

- » Modality: online
- » Duration: 6 months
- » Certificate: TECH Technological University
- » Dedication: 16h/week
- » Schedule: at your own pace
- » Exams: online

Website: www.techtute.com/in/design/postgraduate-diploma/postgraduate-diploma-art-animation-video-games

Index

01

Introduction

p. 4

02

Objectives

p. 8

03

Course Management

p. 12

04

Structure and Content

p. 16

05

Methodology

p. 20

06

Certificate

p. 28

01

Introduction

Video games have become one of the fundamental pillars of entertainment, and it is one of the industries that is experiencing continuous growth. This is due, in large part, to incredible technological advances that have allowed designers to create more realistic and detailed animations, making them almost like a movie. In this way, the visual design of a game has positioned itself as the first feature that users appreciate and demand for future releases. For this reason, it is not surprising that large development companies are looking for profiles that specialize in modeling, 3D design and animation, all of which are covered in this program and will take students' careers to the next level.





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*Are you interested in video game animations
and considering specializing in that area?
Enroll in this program to achieve it"*

The world of video games has been the result of an evolutionary process in different technologies. In their early days, displays were only allowed to show certain pixels in black and white. Then, with the arrival of color, a new world of possibilities opened up, showing certain nuances and differentiating shapes from the background. Nowadays, the screens not only support animation in which textures and contrasts are perfectly detailed, they also help to immerse the player in a new reality, making him or her a participant in the entire virtual environment.

Therefore, those in charge of art and animation in the design of a video game are among the most in-demand profiles in the sector. Animators are the ones who model the characters and bring them to life, as well as all the visual elements that make up the game, so they must possess the right knowledge and skills to achieve an impeccable result.

This Postgraduate Diploma has been developed with all this in mind, with the aim of helping students understand the basics of 3D modeling and texturing using different software, such as Studio Max and Mudbox. Likewise, students will be able to learn the techniques used by the great exponents to animate characters and any element in 2D and 3D.

This program can be studied anywhere in the world thanks to its 100% online modality, meaning designers do not have to put their daily activities on hold in order to attend a class. Additionally, you will have access to the content at any time of the day, making it easy to plan your study at your convenience. Finally, you will not be required to complete a final project to obtain the qualification, that is, you will be able to put into practice what you have learned immediately, favoring your entry into the professional world.

This **Postgraduate Diploma in Art and Animation in Video Games** contains the most comprehensive and up-to-date educational program on the market. The most important features include:

- ◆ Practical cases presented by experts in Art and Animation in Video Games
- ◆ The contents are broad and, at the same time, very specific, especially designed to provide students with specific and general knowledge of video game animation
- ◆ Practical exercises where self-assessment can be used to improve learning
- ◆ Content that is accessible from any fixed or portable device with an Internet connection



The direct qualification of this program will allow you to quickly enter the professional market as a designer specializing in video game animation"

“

Revolutionize the world of video game animation like Jordan Mechner, the first to use motion capture recording”

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 immersive 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.

You will be able to take this program whenever, wherever and however you want thanks to its 100% online modality.

Pixelated graphics and boring kinematics are things of the past. Enroll in this program to create dynamic and innovative animations.



02 Objectives

The objective of this Postgraduate Diploma is to provide students with all the knowledge they need to perform 2D and 3D modeling and animation. To do so, you will need to master different software such as Studio Max and Mudbox, two of the most widely used programs by professionals worldwide. For this purpose, students will have an online program designed by a group of experts of great relevance in the sector at their disposal. As a result, students will be able to advance in their careers and become part of a company's development team or provide their services independently.



“

This is your chance, enroll in a direct qualification program and start your new career path today"



General Objectives

- ◆ 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



This program will allow you to achieve your professional goals, specializing in the design of the animation and art of video games"





Specific Objectives

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. 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 3. 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

03

Course Management

Professional experts in the world of animation and video game art will oversee teaching the contents of this Postgraduate Diploma. They have supervised large projects throughout their careers as animators and game designers. Therefore, students will learn the requirements and demands of the market first hand, allowing them to improve their skills in order to meet these requirements and become valuable assets in the eyes of international companies.





“

This group of professionals is qualified to boost students' careers, based on their experience and academic profiles”

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

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 of Teachers



04

Structure and Content

The contents of this fully online program have been elaborated taking into consideration the expert opinion of a group of professionals dedicated to the development and design of video game animation. Therefore, the student will benefit from a syllabus that focuses on the theoretical aspects of the discipline, the use of different animation software and the development of creative skills to solve any problem that may arise. In addition, all of this is condensed into a Postgraduate Diploma that allows for a direct qualification, facilitating the designer's entry into the labor market.





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You can access the information contained within this Postgraduate Diploma from anywhere in the world"

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. 3D Art

- 2.1. Advanced Art
 - 2.1.1. From Concept Art to 3D
 - 2.1.2. 3D Modeling Principles
 - 2.1.3. Types of Modeling: Organic/Inorganic
- 2.2. 3D Max Interface
 - 2.2.1. 3D Software
 - 2.2.2. Basic Interface
 - 2.2.3. Organization of Scenes
- 2.3. Inorganic Modeling
 - 2.3.1. Modeling with Primitives and Deformers
 - 2.3.2. Editable Polygon Modeling
 - 2.3.3. Graphite Modeling
- 2.4. Organic Model
 - 2.4.1. Character Modeling I
 - 2.4.2. Character Modeling II
 - 2.4.3. Character Modeling III
- 2.5. Creation of UVs
 - 2.5.1. Basic Materials and Maps
 - 2.5.2. Unwrapping and Texture Projections
 - 2.5.3. Retopology
- 2.6. Advanced 3D
 - 2.6.1. Texture Atlas Creation
 - 2.6.2. Hierarchies and Bone Creation
 - 2.6.3. Application of a Skeleton

- 2.7. Animation Systems
 - 2.7.1. Bipet
 - 2.7.2. CAT
 - 2.7.3. ProperRigging
- 2.8. FacialRigging
 - 2.8.1. Expressions
 - 2.8.2. Restrictions
 - 2.8.3. Controllers
- 2.9. Principles of Animation
 - 2.9.1. Cycles
 - 2.9.2. Libraries and Use of MoCap Motion Capture Files
 - 2.9.3. Motion Mixer
- 2.10. Export to Engines
 - 2.10.1. Export to Unity Engine
 - 2.10.2. Exporting Models
 - 2.10.3. Importing Animations

Module 3. Animation

- 3.1. Animation
 - 3.1.1. Traditional Animation
 - 3.1.2. 2D Animation
 - 3.1.3. 3D Animation
- 3.2. 12 Principles of Animation I
 - 3.2.1. Stretch and Shrink
 - 3.2.2. Anticipation
 - 3.2.3. Staging
- 3.3. 12 Principles of Animation II
 - 3.3.1. Direct Action and Pose-by-Pose
 - 3.3.2. Continuous and Superimposed Action
 - 3.3.3. Acceleration and Deceleration
- 3.4. 12 Principles of Animation III
 - 3.4.1. Arches
 - 3.4.2. Secondary Action
 - 3.4.3. Timing

- 3.5. 12 Principles of Animation IV
 - 3.5.1. Exaggeration
 - 3.5.2. Solid Drawing
 - 3.5.3. Personality
- 3.6. 3D Animation
 - 3.6.1. 3D Animation I
 - 3.6.2. 3D Animation II
 - 3.6.3. 3D Kinematics
- 3.7. Advanced 2D Animation
 - 3.7.1. Character Movements I
 - 3.7.2. Character Movements II
 - 3.7.3. Character Movements III
- 3.8. 2D Animation Rigging
 - 3.8.1. Introduction to 2D Rig
 - 3.8.2. 2D Rig Creation
 - 3.8.3. 2D Facial Rig
- 3.9. 2D Animation
 - 3.9.1. Object Movement I
 - 3.9.2. Object Movement II
 - 3.9.3. Object Movement III
- 3.10. Kinematics
 - 3.10.1. Creation of a 2D Kinematic: Basic Introduction
 - 3.10.2. Creation of a 2D Kinematic: Movements in the Environment
 - 3.10.3. Creation of a 2D Kinematic: Export



The best part of this program? Upon completion, you will be able to create the best kinematics the industry has ever seen"

05

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.

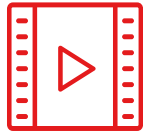
Relearning will allow you to learn with less effort and better performance, involving you more in your training, developing a critical mindset, defending arguments, and contrasting opinions: a direct equation for success.

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.



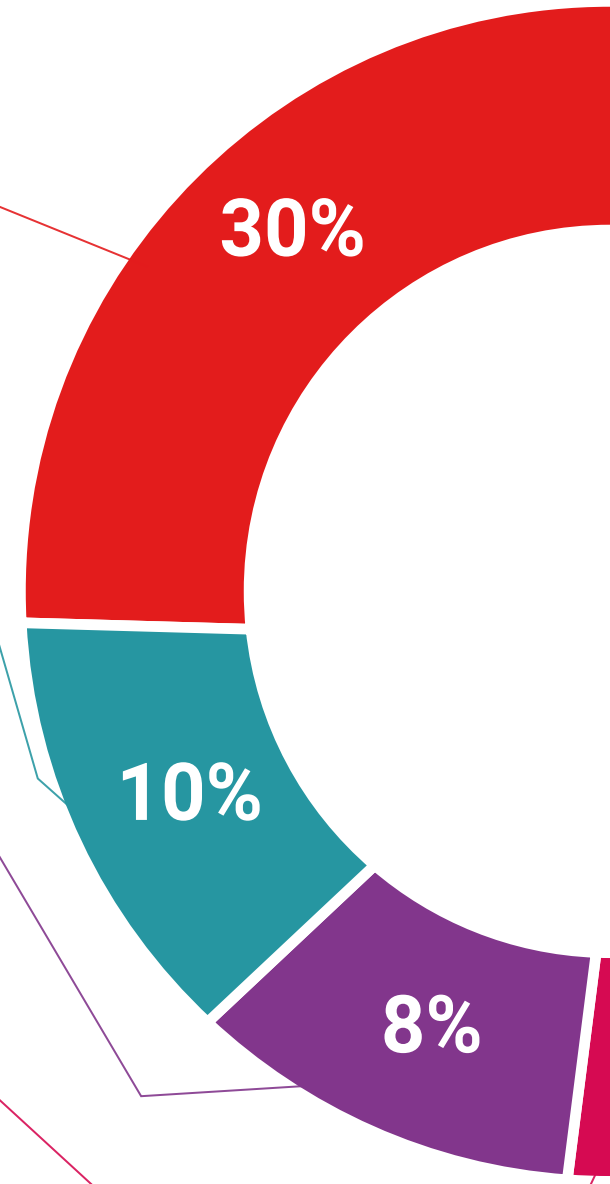
Practising Skills and Abilities

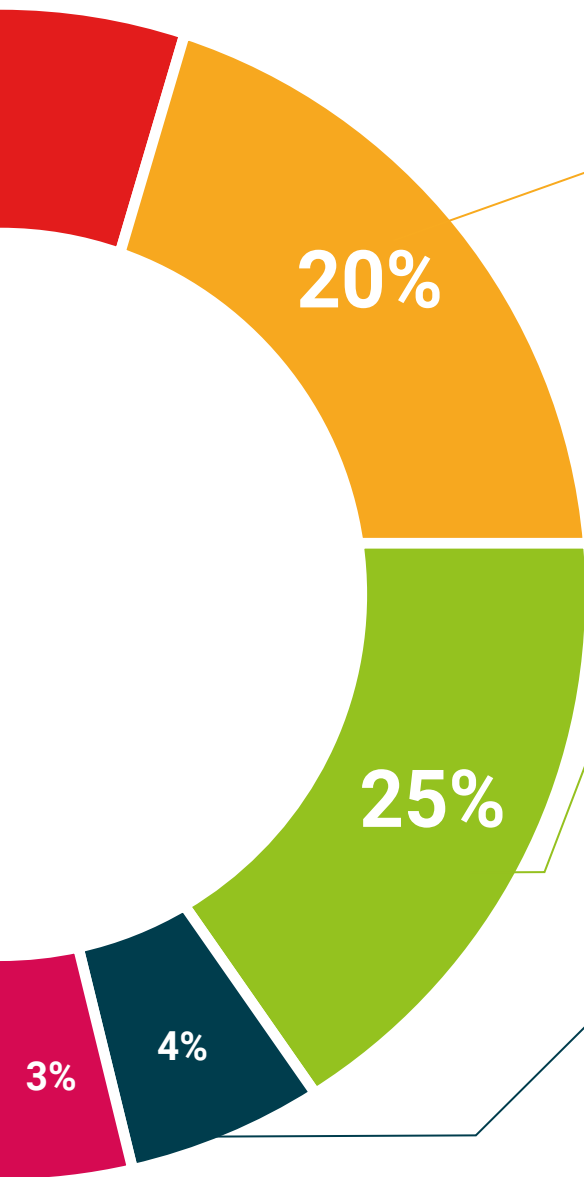
They will carry out activities to develop specific skills and abilities in each subject area. Exercises and activities to acquire and develop the skills and abilities that a specialist needs to develop in the context of the globalization that we are experiencing.



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.



06 Certificate

The Postgraduate Diploma in Art and Animation in Video Games guarantees students, in addition to the most rigorous and up-to-date education, access to a Postgraduate Diploma qualification issued by TECH Technological University.



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

This **Postgraduate Diploma in Art and Animation in Video Games** contains the most complete and up-to-date program on the market.

After the student has passed the assessments, they will receive their corresponding **Postgraduate Diploma** issued by **TECH Technological University** via tracked delivery*.

The certificate issued by **TECH Technological University** will reflect the qualification obtained in the Postgraduate Diploma, and meets the requirements commonly demanded by labor exchanges, competitive examinations, and professional career evaluation committees.

Title: **Postgraduate Diploma in Art and Animation in Video Games**

Official N° of hours: **450 h.**



*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.

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



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Postgraduate Diploma

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