

# Postgraduate Certificate Video Game Development for Mobile Devices





## Postgraduate Certificate Video Game Development for Mobile Devices

- » Modality: online
- » Duration: 6 weeks
- » Certificate: TECH Global University
- » Credits: 6 ECTS
- » Schedule: at your own pace
- » Exams: online

Website: [www.techtitute.com/us/videogames/postgraduate-certificate/video-game-development-mobile-devices](http://www.techtitute.com/us/videogames/postgraduate-certificate/video-game-development-mobile-devices)

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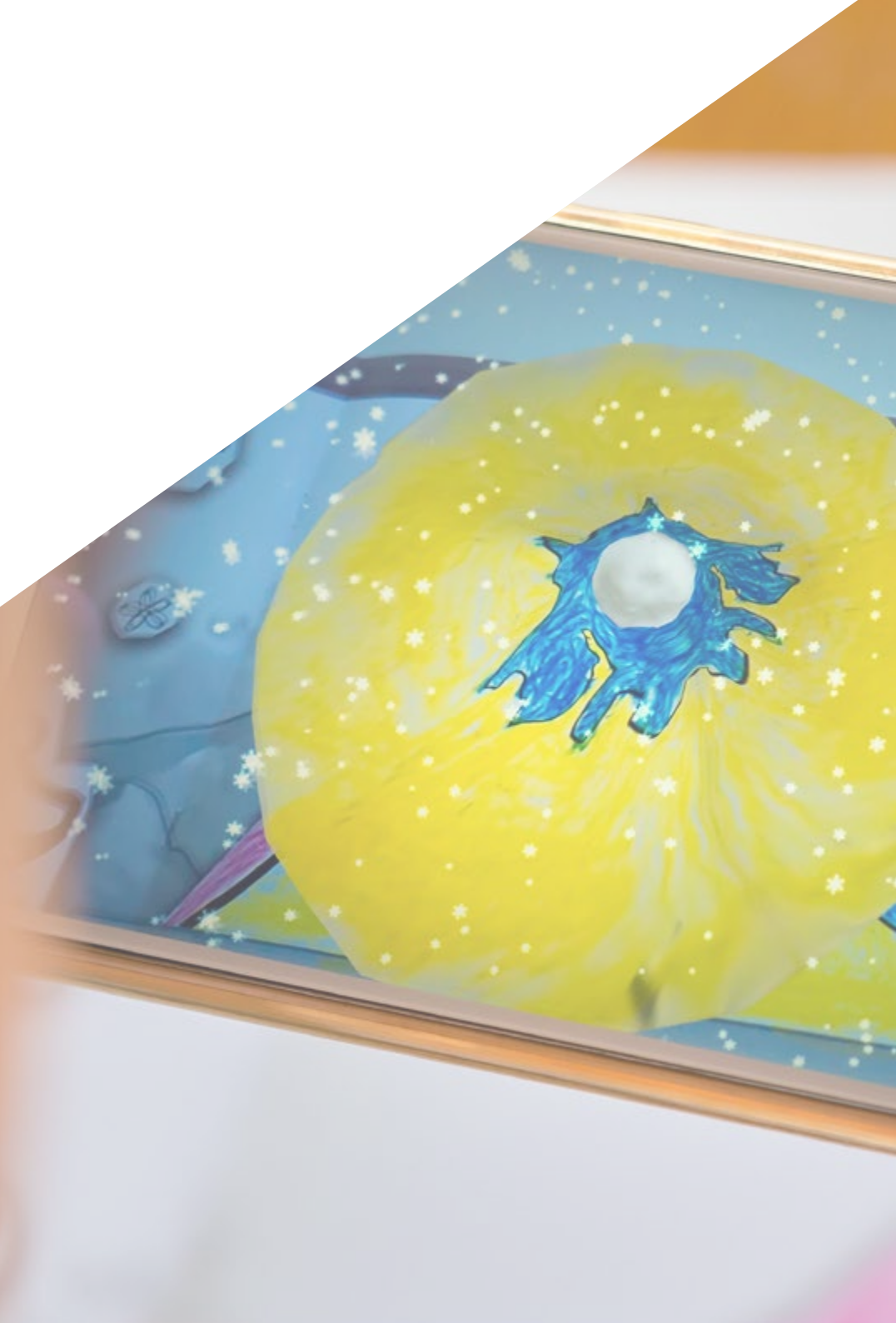
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# 01

# Introduction

Mobile devices are a fundamental part of 21st century societies. They are used for a wide range of activities related to work, friends, family and leisure. For that reason, the video game industry has seen in them a great opportunity to expand. Therefore, mobile devices make up a large percentage of the business share of video game companies. These companies are looking for great specialists in video game development for this type of device and this program provides students with the necessary skills to become experts and, therefore, be highly solicited specialists in the industry.





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*Mobile devices are a fundamental part of of the video game industry. Specialize in this field and increase your possibilities for success in the sector”*

Currently, mobile devices are the main form of technology used for obtaining information. Most web pages are visited through these devices and without them there is no communication between people, who use them as the main tool to talk to friends and family. They are, therefore, the most useful instrument and are used by millions of people each day.

For that reason, the video game industry has seen in them a great opportunity to expand business. However, mobile devices present a series of challenges that are not easy to resolve: they are a less powerful technology than computers and consoles, and so video games must be adapted to this limitation. In addition, the small screen size, compared to other platforms, means that a very specific design is needed to make them playable.

Therefore, these video games need specific preparation to be able to carry out a correct development focused on perfecting them. And to meet that goal, this Postgraduate Certificate in Video Game Development for Mobile Devices offers its students all the essential skills, so that they can advance professionally and have options to access the best companies in the industry.

This **Postgraduate Certificate in Video Game Development for Mobile Devices** contains the most complete and up-to-date educational program on the market. Its most notable features are:

- ◆ Practical cases presented by experts in video game programming and development applied to mobile devices
- ◆ The graphic, schematic, and practical contents with which they are created, provide scientific and practical information on the disciplines that are essential for professional practice
- ◆ Practical exercises where self-assessment can be used to improve learning
- ◆ Special emphasis on innovative methodologies
- ◆ Theoretical lessons, questions to the expert, debate forums on controversial topics, and individual reflection assignments
- ◆ Content that is accessible from any fixed or portable device with an Internet connection



*This Postgraduate Certificate will teach you all you need to know to become a specialist in Video Game Development for Mobile Devices”*

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*This program will radically turn your career around: don't think twice about enrolling”*

*Update everything you know about Video Game Development for Mobile Devices and get the best career opportunities.*

*With this program, it will be easy to access the big companies of the industry.*

The teaching staff of this program includes professionals from the industry, who contribute the experience of their work to this program, in addition to recognized specialists from reference 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 learning programmed to learn 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.



# 02 Objectives

The main objective of this Postgraduate Certificate in Video Game Development for Mobile Devices is to offer its students the best professional opportunities that they will achieve thanks to the skills and the knowledge that they will acquire with this program. Therefore, the focus of this program is eminently practical, as it is intended to serve as an impetus for its students, who are ambitious and desire a job upgrade that will bring them closer to their professional goals.





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*Your objective is to work for the big companies of the industry and this Postgraduate Certificate will help you to achieve it”*



## General Objectives

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- ◆ Have all the necessary tools to develop video games for mobile devices
- ◆ Understand the difference between the development of a video game for consoles and one for these devices
- ◆ Efficient development of video games for mobile devices
- ◆ Know all the keys to design a project of these characteristics





## Specific Objectives

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- ◆ Distinguish the basic concepts of the technologies that support the creation of video games and interactive applications on mobile devices
- ◆ Efficient teamwork to achieve defined objectives
- ◆ Plan a project for mobile devices, as well as its related documentation



*Achieve all your goals with TECH*

# 03

## Structure and Content

This program has been designed by the best experts in Video Game Development for Mobile Devices, who know the industry to perfection and, therefore, know what companies need and what profile of professionals are most in demand. With these issues in mind, this Postgraduate Certificate offers the best knowledge to its students, so that they can apply it in their work environments and therefore achieve all their objectives.





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*The best content on Video Game Development for Mobile Devices, now at your fingertips”*

## Module 1. Developments for Mobile Devices

- 1.1. Introduction to LibGDX
  - 1.1.1. Creating a Project
  - 1.1.2. Hello World!
  - 1.1.3. Basic Graphics
  - 1.1.4. Controlling the Input
  - 1.1.5. Basic Camera Concepts
  - 1.1.6. Audio
  - 1.1.7. 2D Scene
  - 1.1.8. Tilemaps
  - 1.1.9. Physical Simulation
- 1.2. OOP in Java
  - 1.2.1. Classes and Objects
  - 1.2.2. General Grammar Aspects in Java
  - 1.2.3. Statements
  - 1.2.4. Conditional and Looping Statements
  - 1.2.5. Classes and Objects
  - 1.2.6. Inheritance and Polymorphism
  - 1.2.7. Correlation Between Classes
- 1.3. Texture
  - 1.3.1. SpriteBatch
  - 1.3.2. Insert Images with SpriteBatch
  - 1.3.3. Size and Position of Images
  - 1.3.4. Image Optimization
- 1.4. Inputs Control
  - 1.4.1. Detect Input
  - 1.4.2. InputAdapter: Input Events
  - 1.4.3. Input Processors Input Events
  - 1.4.4. Processing of the Input





- 1.5. Camera, Viewport, Aspect Ratio and System of Coordinates
  - 1.5.1. Camera Control
  - 1.5.2. History of Aspect Ratio
  - 1.5.3. Optimization of the Aspect Ratio
  - 1.5.4. Correct Use of Coordinate Systems
- 1.6. API Controllers
  - 1.6.1. What is an API?
  - 1.6.2. API Packets in LibGDX
  - 1.6.3. Implementation of API in LibGDX
  - 1.6.4. Use of API in Video Games
- 1.7. User Interfaces and HUD
  - 1.7.1. What is an UI?
  - 1.7.2. Differences Between UI and HUD
  - 1.7.3. Designing a UI
  - 1.7.4. Implementation
- 1.8. Particle Effects
  - 1.8.1. 2D Particle Effects
  - 1.8.2. 3D Particle Effects: Billboards
  - 1.8.3. 3D Particle Effects: Point Sprites
  - 1.8.4. 3D Particle Effects: ModelInstance
  - 1.8.5. Resource Consumption
- 1.9. Implementation of Music and Sound
  - 1.9.1. Sound Formats
  - 1.9.2. Implementation in LibGDX
  - 1.9.3. Conversion Between Formats: Loss of Quality
  - 1.9.4. Video Game Analysis: Music and Sound
- 1.10. State-of-the-Art and Future of Video Games in Mobile Devices
  - 1.10.1. History of Video Games in Mobile Devices
  - 1.10.2. Past Business Model vs. Current Business Model
  - 1.10.3. Free 2 Play vs. Pay 2 Win
  - 1.10.4. The Future of Games for Mobile Devices

# 04 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.







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*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.*



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

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.



# 05 Certificate

The Postgraduate Certificate in Video Game Development for Mobile Devices guarantees students, in addition to the most rigorous and up-to-date education, access to a Postgraduate Certificate issued by TECH Global University.





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

This program will allow you to obtain your **Postgraduate Certificate in Video Game Development for Mobile Devices** 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: **Postgraduate Certificate in Video Game Development for Mobile Devices**

Modality: **online**

Duration: **6 weeks**

Accreditation: **6 ECTS**



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



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- » Schedule: at your own pace
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