

Postgraduate Certificate Video Game Web and Network Development



Postgraduate Certificate Video Game Web and Network Development

- » Modality: online
- » Duration: 12 weeks
- » Certificate: TECH Technological University
- » Dedication: 16h/week
- » Schedule: at your own pace
- » Exams: online

Website: www.techtute.com/pk/information-technology/postgraduate-certificate/video-game-web-network-development

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01

Introduction

The Internet has changed everything in just a few years. The same is true for video games, since a large number of today's most successful titles are enjoyed online. Thus, web games are very popular, so the big companies in the industry are working hard to develop titles in this genre that can be successful. For that reason, it is a field full of interesting career options, and this program offers students the appropriate skills and knowledge to respond to this situation, which will allow them to access interesting opportunities in the best video game companies in the world.





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Develop web games for the best companies in the world thanks to this Postgraduate Certificate”

The possibilities of the Internet are almost endless. Its popularization has opened the doors to perform a large number of tasks in the digital environment. Thus, it is now possible to carry out all kinds of administrative procedures, purchases and sales and other more recreational activities such as playing video games online.

Furthermore, online games are some of the most enjoyed around the world, and within this important set of products those played on websites are in a prominent position. These web games are highly valued by large companies in the industry, since they have a great reach and do not require as many resources as other large productions.

For this reason, companies are looking for experts who have specialized in this field, so they can design the next successful games for them, making them successful in the process. Throughout this program, students will be able to learn all about HTML 5 language, about servers and their function during the game experience, about CSS and JavaScript, as well as concepts related to network gaming that are basic to implement this type of titles.

This Postgraduate Certificate in Video Game Web and Network Development and Networking offers its students the best knowledge to become true specialists in the field, so they can access some of these large companies.

This **Postgraduate Certificate in Video Game Web and Network Development** contains the most complete and up-to-date scientific program on the market. Its most notable features are:

- ◆ Practical cases presented by experts in video game web and network development in this area
- ◆ The graphic, schematic, and eminently 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
- ◆ Its 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



Become an expert in Web and Network Development, and create the best video games in some of the companies you admire"

“

This Postgraduate Certificate in Video Game Web and Network Development will make your career advance quickly”

The program's teaching staff includes professionals from the 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 during the academic year. For this purpose, the student will be assisted by an innovative interactive video system created by renowned and experienced experts.

Design the most popular web games of the future with the skills you will gain on this program.

Specialize and attract the appeal to the best companies in the video game industry.



02

Objectives

The main objective of this Postgraduate Certificate in Video Game Web and Network Development is to offer its students the best professional opportunities, providing them with a series of concepts and skills that will make them great experts in the field. Thus, they will be able to choose to work in some of the best Video Game Companies in the world thanks to everything they will learn on this high-level program.





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*You are ambitious and want to go far.
Complete this Postgraduate Certificate
and advance your career”*



General Objectives

- ◆ Understand the Role Networks play in the Use and Development of Videogames
- ◆ Develop Web and Multiplayer Video Games
- ◆ Become familiar with the different Programming Methods applied to Video Games
- ◆ Study the Security Processes involved in Video Games

“

*TECH will help you achieve
all your goals”*





Specific Objectives

Module 1. Web Game Design and Development

- ◆ Design Games and Interactive Web Applications with the corresponding Documentation
- ◆ Evaluate the main features of Games and Interactive Web Applications for professional and adequate communication

Module 2. Multiplayer Networks and Systems

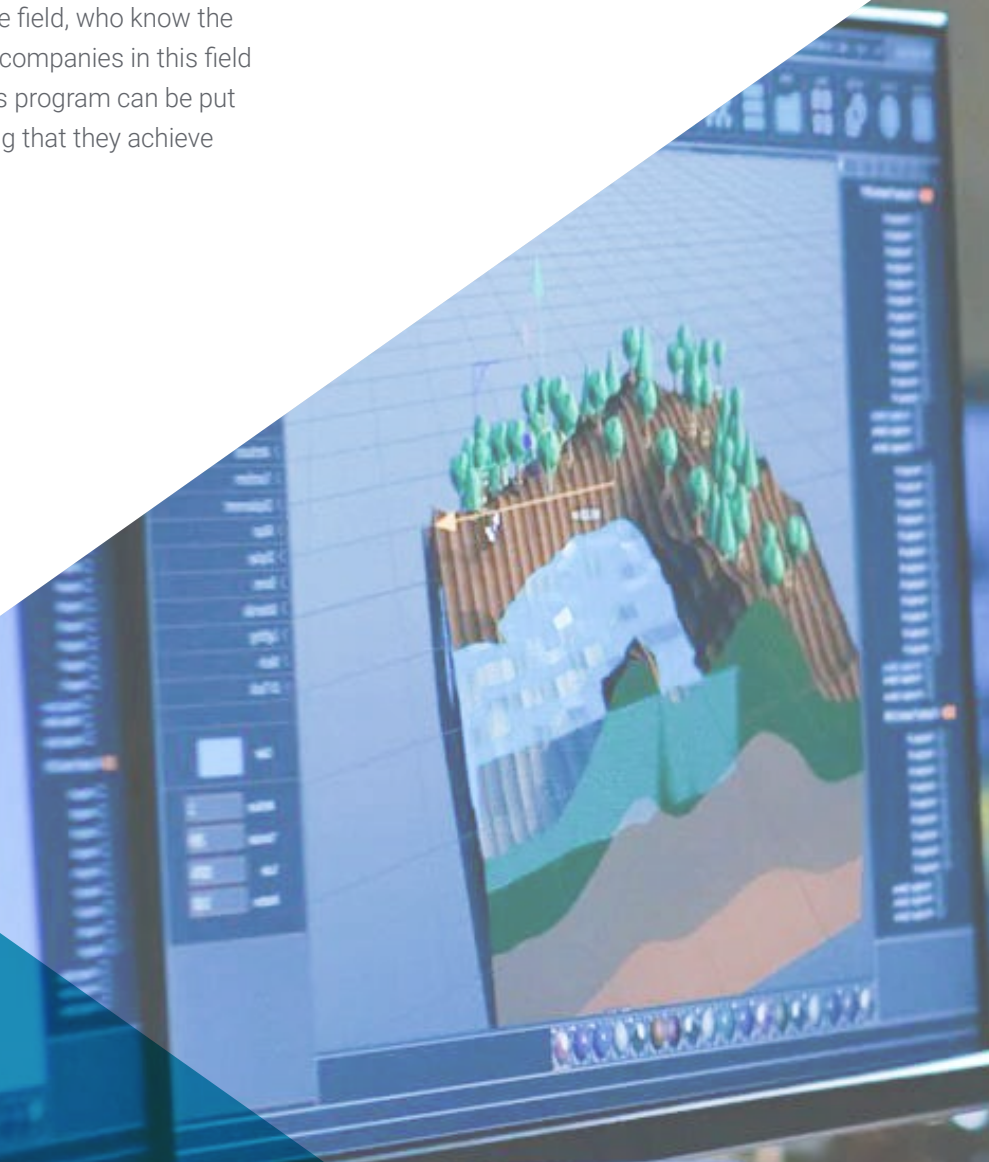
- ◆ Describe the Transmission Control Protocol/Internet Protocol (TCP/IP) Architecture and the Basic Operation of Wireless Networks
- ◆ Analyze Video Games Security
- ◆ Develop Multiplayer Online Games



03

Structure and Content

The contents of this Postgraduate Certificate in Video Game Web and Network Development have been created by real specialists in the field, who know the profession to perfection and who know, therefore, what companies in this field demand. Thus, everything that students will learn on this program can be put into practice directly in their work environments, ensuring that they achieve immediate advancement in their careers.



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*These contents will make you an expert in
Video Game Web and Network Development”*

Module 1. Web Game Design and Development

- 1.1. Web Origins and Standards
 - 1.1.1. Internet Origins
 - 1.1.2. World Wide Web
 - 1.1.3. First Web Standards
 - 1.1.4. Rise Web Standards
- 1.2. HTTP and Client-Server Structure
 - 1.2.1. Client-Server Role
 - 1.2.2. Client-Server Communication
 - 1.2.3. Recent History
 - 1.2.4. Centralized Computing
- 1.3. Web Programming: Introduction
 - 1.3.1. Basic Concepts
 - 1.3.2. Preparing Web Servers
 - 1.3.3. Basic Concepts of HTML5
 - 1.3.4. HTML Forms
- 1.4. Introduction to HTML and Exapmles
 - 1.4.1. HTML5 History
 - 1.4.2. HTML5 Elements
 - 1.4.3. Application Programming Interface (API)
 - 1.4.4. CCS3
- 1.5. Document Object Model
 - 1.5.1. What Is a Document Object Model?
 - 1.5.2. Using DOCTYPE
 - 1.5.3. The Importance of Validating the HTML
 - 1.5.4. Accessing Elements
 - 1.5.5. Creating Elements and Texts
 - 1.5.6. Using InnerHTML
 - 1.5.7. Deleting an Element or Text Node
 - 1.5.8. Reading and Writing Element Attributes
 - 1.5.9. Manipulating Element Styles
 - 1.5.10. Attaching Multiple Files at Once
- 1.6. Introduction to CSS and Examples
 - 1.6.1. CSS3 Syntax
 - 1.6.2. Style Sheets
 - 1.6.3. Labels
 - 1.6.4. Selectors
 - 1.6.5. CSS Web Design
- 1.7. Introduction to JavaScript and Examples
 - 1.7.1. What Is JavaScript?
 - 1.7.2. A Brief History of the Language
 - 1.7.3. JavaScript Versions
 - 1.7.4. Displaying Dialog Boxes
 - 1.7.5. JavaScript Syntax
 - 1.7.6. Understanding *Scripts*
 - 1.7.7. Spaces
 - 1.7.8. Comments
 - 1.7.9. Functions
 - 1.7.10. On-Page and External JavaScript
- 1.8. JavaScript Functions
 - 1.8.1. Function Declaration
 - 1.8.2. Function Expression
 - 1.8.3. Calling Functions
 - 1.8.4. Recursion

- 1.8.5. Nested Functions and Closures
- 1.8.6. Variable Preservation
- 1.8.7. Multinested Functions
- 1.8.8. Name Conflicts
- 1.8.9. Closings or Closures
- 1.8.10. Function Parameters
- 1.9. PlayCanvas for Web Game Development
 - 1.9.1. What Is PlayCanvas?
 - 1.9.2. Project Configuration
 - 1.9.3. Creating an Object
 - 1.9.4. Adding Physics
 - 1.9.5. Adding Models
 - 1.9.6. Changing the Gravity and Scene Settings
 - 1.9.7. Executing *Scripts*
 - 1.9.8. Camera Controls
- 1.10. Phaser for Web Game Development
 - 1.10.1. What Is Phaser?
 - 1.10.2. Loading Resources
 - 1.10.3. Building the World
 - 1.10.4. Platforms
 - 1.10.5. Players
 - 1.10.6. Adding Physics
 - 1.10.7. Using the Keyboard
 - 1.10.8. *Pickups*
 - 1.10.9. Points and Scoring
 - 1.10.10. Bouncing Bombs

Module 2. Multiplayer Networks and Systems

- 2.1. History and Evolution of Multiplayer Video Games
 - 2.1.1. The 1970s: First Multiplayer Games
 - 2.1.2. The 90s: Duke Nuke, Doom and Quake
 - 2.1.3. Rise of Multiplayer Video Games
 - 2.1.4. Local or Online Multiplayer
 - 2.1.5. Party Games
- 2.2. Multiplayer Business Models
 - 2.2.1. Origin and Function of Emerging Business Models
 - 2.2.2. Online Sales Services
 - 2.2.3. Free to Play
 - 2.2.4. Micropayments
 - 2.2.5. Advertising
 - 2.2.6. Monthly Payment Subscription
 - 2.2.7. Pay to Play
 - 2.2.8. Try before You Buy
- 2.3. Local and Network Games
 - 2.3.1. Local Games: Beginnings
 - 2.3.2. Party Games: Nintendo and Family Union
 - 2.3.3. Networks Games: Beginnings
 - 2.3.4. Network Games Evolution
- 2.4. OSI Model: Layers I
 - 2.4.1. OSI Model: Introduction
 - 2.4.2. Physical Layer
 - 2.4.3. Data Link Layer
 - 2.4.4. Network Layer
- 2.5. OSI Model: Layers II
 - 2.5.1. Transport Layer
 - 2.5.2. Session Layer
 - 2.5.3. Presentation Layer
 - 2.5.4. Application Layer

- 2.6. Computer Networks and the Internet
 - 2.6.1. What Are Computer Networks?
 - 2.6.2. Software
 - 2.6.3. Hardware
 - 2.6.4. Servers
 - 2.6.5. Network Storage
 - 2.6.6. Network Protocols
- 2.7. Mobile and Wireless Networks
 - 2.7.1. Mobile Networks
 - 2.7.2. Wireless Networks
 - 2.7.3. How Mobile Networks Work
 - 2.7.4. Digital Technology
- 2.8. Security
 - 2.8.1. Personal Security
 - 2.8.2. Video Game Hacks and Cheats
 - 2.8.3. Anti-Cheating Security
 - 2.8.4. Anti-Cheating Security Systems Analysis
- 2.9. Multiplayer Systems: Servers
 - 2.9.1. Server Hosting
 - 2.9.2. Massively Multiplayer Online (MMO) Video Games
 - 2.9.3. Dedicated Video Game Servers
 - 2.9.4. Local Area Network (LAN) Parties
- 2.10. Multiplayer Video Game Design and Programming
 - 2.10.1. Multiplayer Video Game Design Basics in Unreal
 - 2.10.2. Multiplayer Video Game Design Basics in Unity
 - 2.10.3. How to Make a Multiplayer Game Fun
 - 2.10.4. Beyond a Controller: Multiplayer Controller Innovation





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You have great ideas and with this Postgraduate Certificate you will be able to bring them to fruition. Don't wait any longer and enroll”

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.



“

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 Information Technology 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. Throughout the course, students 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 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 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.



05 Certificate

The Postgraduate Certificate in Video Game Web and Network Development guarantees, in addition to the most rigorous and up-to-date training, access to a qualification issued by TECH Technological University.



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*Successfully complete this training program
and receive your certificate without travel or
laborious paperwork”*

This **Postgraduate Certificate in Video Game Web and Network Development** contains the most complete and up-to-date scientific program the market.

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

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

Title: **Postgraduate Certificate in Video Game Web and Network Development**

Official N° of hours: **300 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.

health

future

confidence people

education information tutors

guarantee accreditation teaching

institutions technology learning

community commitment

personalized service innovation

knowledge present

online tra

velopment

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