

Postgraduate Certificate

3D Industry





Postgraduate Certificate 3D Industry

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

Website: www.techtute.com/us/videogames/postgraduate-certificate/3d-industry

Index

01

Presentation

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

In order to develop efficient animation and video game projects, it is necessary to know the industry in detail, as well as to master each of the steps integrated in an effective pipeline. On this basis, professionals can work with total guarantee and safety, minimizing production times and ensuring promising results. For this reason, if what the graduate is looking for is to acquire specialized knowledge about the 3D Industry applicable to the current situation of this sector, this program offered by TECH may be the best option to achieve it. Through 150 hours of online education, the video game professional will be able to work in an immersive way to improve their skills through the use of the main integration software and the use of key artistic styles such as cartoon, Cel Shading or Motion Capture.



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A useful academic option to implement to your creative praxis the main 3D integration strategies in the digital world"

3D integration and asset generation have become two of the most sought-after skills in the video game industry. Companies in this sector require their professionals to have a thorough knowledge of the main tools and software to create successful projects, in which rendering and resource optimization are not a problem that affects the final result.

For this reason, in addition to knowing the ins and outs of this field, the difficulties that may arise and the possible solutions that the professional must handle, the exhaustive handling of programs such as 3D Max, Maya or Blender are fundamental requirements for the ideal profile for any audiovisual entity. Based on this, this program takes on a significant relevance, which can positively interfere in the student's future employment.

It is an academic experience developed over 6 weeks and includes 150 hours of the best content selected by experts in video games and technology, who will also be part of the teaching team. The syllabus delves into the characteristics of the industry and the main artistic styles that are most in demand today, as well as the pros and cons of using the main 3D software for video games. In addition, it also places special emphasis on integration and rendering, focusing on its application in different industries: film, series, advertising and entertainment.

Among the most important features of this Diploma is its convenient and accessible 100% online format, which will allow the graduate to connect from anywhere and with a schedule fully adapted to their availability. In addition, all the content can be downloaded from the beginning of the academic activity, giving you the option to continue with the training, even when you do not have coverage and through any device: mobile, tablet or pc.

This **Postgraduate Certificate in 3D Industry** contains the most complete and up-to-date program on the market. The most important features include:

- ◆ The development of practical cases presented by experts in Video Games and Video Technologies
- ◆ The graphic, schematic, and practical contents with which they are created, provide practical information on the disciplines that are essential for professional practice
- ◆ Practical exercises where the self-assessment process can be carried out to improve learning
- ◆ Special emphasis on 3D modeling and animation in virtual environments
- ◆ 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



You will be able to delve into the future expectations of 3D animation, giving you the option to establish innovative and revolutionary pipelines"

“

Knowing the difficulties of developing a 3D video game will help you to be prepared to assume with caution and confidence the direction or management of a project of this type”

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

Versatility, comprehensiveness and multidisciplinary are the three adjectives that, without a doubt, define this 100% online program.

A Postgraduate Certificate with which you will be able to get ideas for the generation of 3D assets from a Modelsheet.



02 Objectives

The lack in the educational market of a degree through which professionals in the video game sector can learn in detail the 3D industry, as well as TECH's commitment to the growth of each of them, is what has motivated the team of experts to develop the Diploma. Therefore, the main objective of this course is to provide specialists with all the information they need to master the keys to animation and video games and the use of 3D techniques that are currently achieving the best results.



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Opt for a program that includes the best content, as well as the most sophisticated academic strategies, so that you can meet even your most ambitious goals in just 6 weeks”



General Objectives

- ◆ Provide specialized knowledge about the 3D Industry
- ◆ Use 3D Max software to generate different contents
- ◆ Propose a series of best practices and organized and professional work



Knowledge of the key factors of 3D for different industries will allow you to adapt your projects to other fields such as film, series or advertising”





Specific Objectives

- ◆ Examine the current state of the 3D industry, as well as its evolution over the last few years
- ◆ Generate specialized knowledge about the software commonly used within the industry to generate professional 3D content
- ◆ Determine the steps to develop this type of content through a pipeline adapted to the video game industry
- ◆ Analyze the most advanced 3D styles, as well as their differences, advantages and disadvantages for subsequent generation
- ◆ Integrate content developed in both the digital world (video games, VR, etc.) and the real world (AR, MR/XR)
- ◆ Establish the key points that differentiate a 3D project in the video game industry, cinema, TV series or the world of advertising
- ◆ Generate professional quality 3D assets using 3D Max and learn how to use the tool
- ◆ Maintain an organized workspace and maximize the efficiency of time spent generating 3D content

03

Course Management

TECH has selected for this Diploma a faculty specialized in video games and technology with a wide and extensive professional experience in the management of projects related to the 3D industry. In addition, among the options offered by this university is the possibility of individualized tutoring with them, so that graduates can resolve all their doubts and get the most out of this academic experience.



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The experience of the teaching team will guide you in polishing your professional skills and adapting your profile to the needs of the industry"

Management



Mr. Ortega Ordóñez, Juan Pablo

- ◆ Director of Engineering and Gamification Design for the Intervenía Group
- ◆ Professor at ESNE of Video Game Design, Level Design, Video Game Production, Middleware, Creative Media Industries, etc.
- ◆ Advisor in the foundation of companies such as Avatar Games or Interactive Selection
- ◆ Author of the book Video Game Design
- ◆ Member of the Advisory Board of Nima World

Professors

Dr. Pradana Sánchez, Noel

- ◆ Specialist in Rigging and 3D Animation for videogames
- ◆ 3D Graphic Artist at Dog Lab Studios
- ◆ Producer at Imagine Games leading the video game development team
- ◆ Graphic artist at Wildbit Studios with 2D and 3D works
- ◆ Teaching experience in ESNE and in the CFGS in 3D Animation: games and educational environments
- ◆ Professional Masters Degree in Video Game Design and Development from ESNE University
- ◆ Master's Degree in Teacher Training from Rey Juan Carlos University
- ◆ Specialist in Rigging and 3D Animation Voxel School

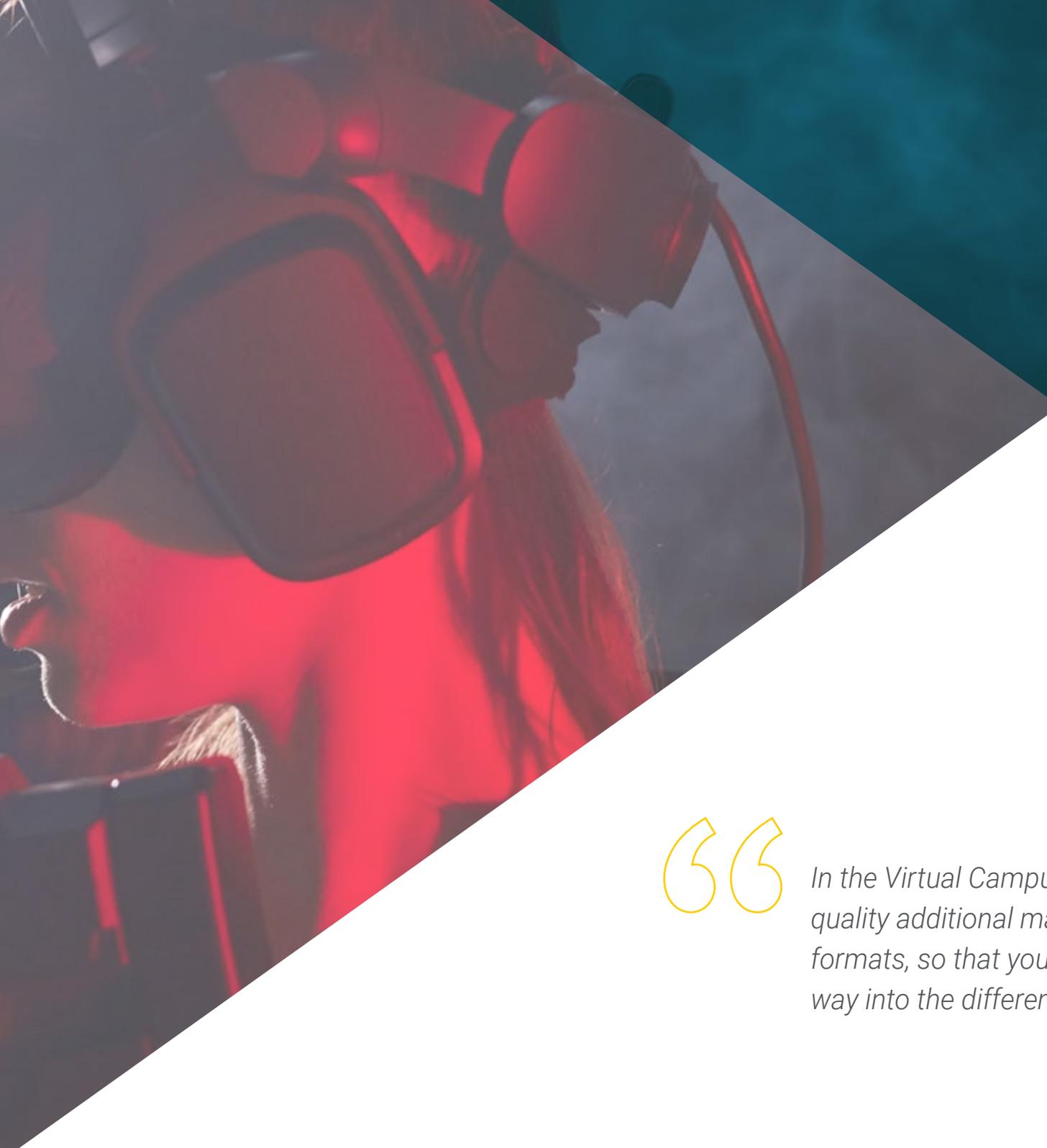


04

Structure and Content

Part of TECH's success lies in the offer of dynamic, comprehensive and complete degrees, framed in a convenient 100% online format. In this case, the Diploma includes 150 hours of theoretical, practical and additional content (detailed videos, research articles, complementary readings, etc.), which will be available from the beginning of the academic activity and can be downloaded to any device. In this way, the graduate will be able to continue with the course of the program without limitations and always based on his or her own availability.





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In the Virtual Campus you will find hours of high-quality additional material presented in different formats, so that you can delve in a personalized way into the different aspects of the syllabus"

Module 1. The 3D Industry

- 1.1. 3D Animation and Video Game Industry
 - 1.1.1. 3D Animation
 - 1.1.2. 3D Animation and Video Game Industry
 - 1.1.3. 3D Animation Future
- 1.2. 3D in Video Games
 - 1.2.1. Video Games Limitations
 - 1.2.2. 3D Video Game Development Difficulties
 - 1.2.3. Solutions to Video Game Development Difficulties
- 1.3. 3D Software for Video Games
 - 1.3.1. Maya. Pros and Cons
 - 1.3.2. 3Ds Max. Pros and Cons
 - 1.3.3. Blender. Pros and Cons
- 1.4. Pipeline in 3D Asset Generation for Video Games
 - 1.4.1. Idea and assembly from a Model Sheet
 - 1.4.2. Modeling with Low Geometry and High Detailing
 - 1.4.3. Projection of Textured Details
- 1.5. Key Artistic 3D Styles for Video Games
 - 1.5.1. Cartoon Style
 - 1.5.2. Realistic Style
 - 1.5.3. Cel Shading
 - 1.5.4. Motion Capture
- 1.6. 3D Integration
 - 1.6.1. 2d Digital World Integration
 - 1.6.2. 3d Digital World Integration
 - 1.6.3. Real-World Integration (AR, MR/XR)
- 1.7. Key 3D Factors for Different Industries
 - 1.7.1. 3D in Film and Series
 - 1.7.2. 3D in Video Games
 - 1.7.3. 3D in Marketing



- 1.8. Render: Real-Time Rendering and Pre-Rendering
 - 1.8.1. Lighting
 - 1.8.2. Shadow Definition
 - 1.8.3. Quality vs Speed
- 1.9. 3D Asset Generation in 3D Max
 - 1.9.1. 3D Max Software
 - 1.9.2. Interface, Menus, Toolbars
 - 1.9.3. Controls
 - 1.9.4. Scene
 - 1.9.5. Viewports
 - 1.9.6. Basic Shapes
 - 1.9.7. Object Generation, Modification and Transformation
 - 1.9.8. 3D Scene Creation
 - 1.9.9. 3D Professional Asset Modeling for Video Games
 - 1.9.10. Material Editors
 - 1.9.10.1. Creating and Editing Materials
 - 1.9.10.2. Applying Light to Materials
 - 1.9.10.3. UVW Map Modifier. Mapping Coordinates
 - 1.9.10.4. Texture Creation
- 1.10. Workspace Organization and Best Practices
 - 1.10.1. Creation of a Project
 - 1.10.2. Folder Structure
 - 1.10.3. Custom Functionality

“*Opt for a program, that will elevate your talent to the pinnacle of the 3D industry with TECH and this comprehensive program”*



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.





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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.

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At TECH, you will experience a learning methodology that is shaking the foundations of traditional universities around the world”



You will have access to a learning system based on repetition, with natural and progressive teaching throughout the entire syllabus.



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

A learning method that is different and innovative

This TECH program is an intensive educational program, created from scratch, which presents the most demanding challenges and decisions in this field, both nationally and internationally. This methodology promotes personal and professional growth, representing a significant step towards success. The case method, a technique that lays the foundation for this content, ensures that the most current economic, social and professional reality is taken into account.

“*Our program prepares you to face new challenges in uncertain environments and achieve success in your career”*

The case method has been the most widely used learning system among the world's leading business schools for as long as they have existed. The case method was developed in 1912 so that law students would not only learn the law based on theoretical content. It consisted of presenting students with real-life, complex situations for them to make informed decisions and value judgments on how to resolve them. In 1924, Harvard adopted it as a standard teaching method.

What should a professional do in a given situation? This is the question that you are presented with in the case method, an action-oriented learning method. Over the course of 4 years, you will be presented with multiple practical case studies. You will have to combine all your knowledge, and research, argue, and defend your ideas and decisions.

Relearning Methodology

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

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

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

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

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



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

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

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

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

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



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



Study Material

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

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



Classes

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

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



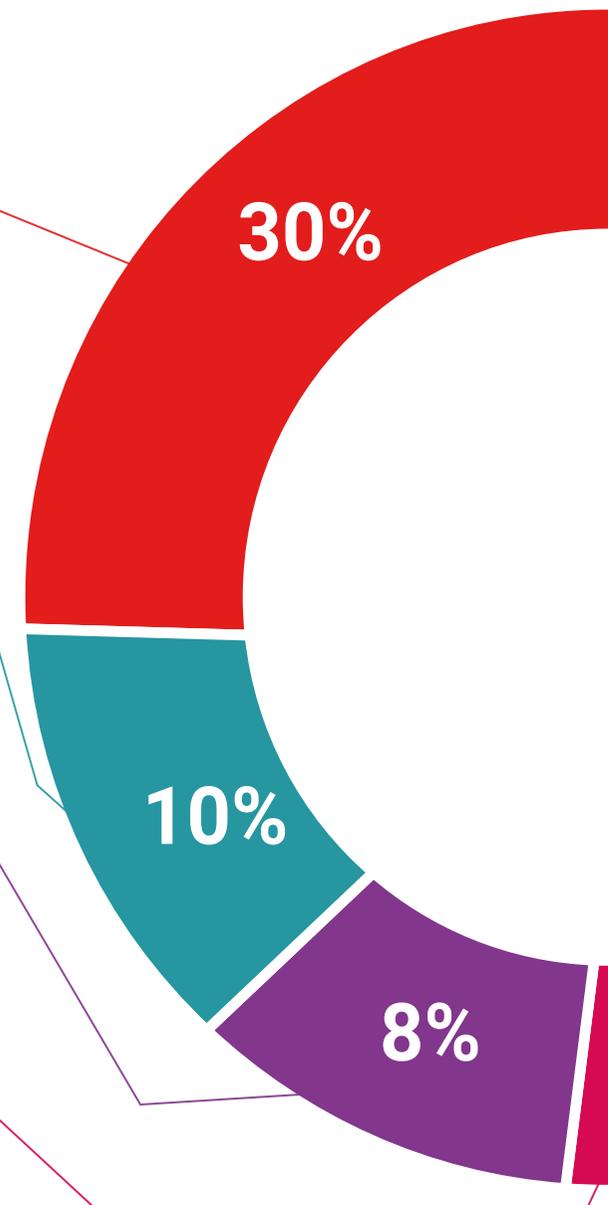
Practising Skills and Abilities

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



Additional Reading

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





Case Studies

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



Interactive Summaries

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

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



Testing & Retesting

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



06

Certificate

The Postgraduate Certificate in Industry in 3D Industry guarantees students, in addition to the most rigorous and up-to-date education, access to a Postgraduate Certificate issued by TECH Technological 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 3D Industry** 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 3D Industry**

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
online training
development language
classroom



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