Postgraduate Certificate
Applications of Modeling in 3D Printing, VR, AR and Photogrammetry

tech technological university

Postgraduate Certificate
Applications of Modeling in 3D Printing, VR, AR and Photogrammetry

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

Website: **www.techtitute.com/in/design/postgraduate-certificate/applications-modeling-3d-printing-vr-ar-photogrammetry**

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01
Introduction

3D printing through the application of virtual or augmented reality technologies is revolutionizing the world. With this, it is possible to give life to characters, customized models and any kind of prototype. This program will apply the latest development technologies by implementing CGI and photogrammetry. Students enter the world of 3D model generation using the most advanced techniques and tools. All this through a 100% online learning system directed by experts who will provide you with the best study experience.

"You'll be prepared for what's to come. With the most advanced 3D Printing, VR, AR and Photogrammetry techniques"

3D modeling has given rise infinite possibilities for creation in different types of industry. It has been used in animation, video games and infoarchitecture. Therefore, developing new skills is essential for professionals who want to evolve in the current and future labor market, where virtual reality is becoming increasingly important.

Graduates of the Postgraduate Certificate in Applications of Modeling to 3D Printing, VR, AR and Photogrammetry will know how to implement the latest developments in CGI. Import your projects in the correct formats and master polygon reduction and projection tools. Through these tools, you will obtaining the best results with low polygonization.

Likewise, students will be able to create efficient and low-cost systems by making sockets, so that the figures can be printed and at the same time serialized by using molds. You will have knowledge of Agisoft Metashape software. In addition, you will be able to handle models that require a cleaning and polygon reduction treatment with *Decimation* master. And have models visible in classic 3D software, 3D printing, and obtain interactive visualizations in *Realtime*.

The best content, led by experts and supported by an advanced online study system. Based on *Relearning*, the most avant-garde methodology promoted by TECH Technological University that allows the student to integrate knowledge in an optimal way and successfully achieve the learning results. In only 6 weeks, using any device with an internet connection and with the possibility of downloading contents for your complete convenience.

This **Postgraduate Certificate in Applications of Modeling in 3D Printing, VR, AR and Photogrammetry** contains the most complete and up-to-date program on the market. Its most notable features are:

- Practical cases presented by experts in 3D modeling and digital sculpture.
- 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
- 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

All the contents on a single platform. Available to you now"

The best content selected for you by teachers and pedagogues of the highest level and presented as interactive multimedia elements"

With this course, you will be able to generate 3D models through photography using Agisoft Metashape software"

Learn how to create fittings for your figures. For serial production using molds"

The program's teaching faculty includes professionals from the fashion industry who contribute with their work experience, as well as renowned specialists from leading companies 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 an immersive training experience designed to train for real-life 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 professional will be assisted by an innovative system of interactive videos made by renowned experts.

Objectives

The main objective of this program is to teach professionals all the methods that can be used in 3D Printing, VR, AR and Photogrammetry in current and future worlds, and how to optimally handle all the tools and techniques that will allow them to generate their own models. Led by a specialized teaching team that will accompany students throughout the learning process, and where they will be able to interact through an online platform that combines the latest educational technology and ideal content.

Study online and organize contents in your own way. Adapt these to your own timetable and location"

General Objectives

- Apply accurate modeling, texturing, lighting and rendering processes
- Incorporate development technologies by implementing CGI.
- Learn to import models into 3D, VR and AR printing formats
- Use photogrammetry to generate 3D models
- Understand the necessity of having an adequate topology at all levels of development and production
- Understand the current demands of the movie and video game industries in order to offer best results

Specific Objectives

- Use organic modeling for the preparation of 3D printing and milling models
- Generate 3D models through photography and treatment to integrate them in 3D printing, video games and film
- Sculpt in virtual reality in a free, creative and interactive way using Quill and its import into Arnold, Unreal and Unity
- Visualization of work in real environments through augmented reality

With this training, you will be able to generate 3D models by implementing Photogrammetry"

03
Course Management

To design and deliver this Postgraduate Certificate in Applications of Modeling in 3D, VR, AR Printing and Photogrammetry TECH Technological University has chosen the most experienced teachers in 3D modeling and concept art who have exhaustively chosen each of the topics of study and will be accompany the student throughout the learning process. All through a 100% online environment using a secure and dynamic platform.

TECH chooses the best specialists in each subject of study for your professionalization"

Management

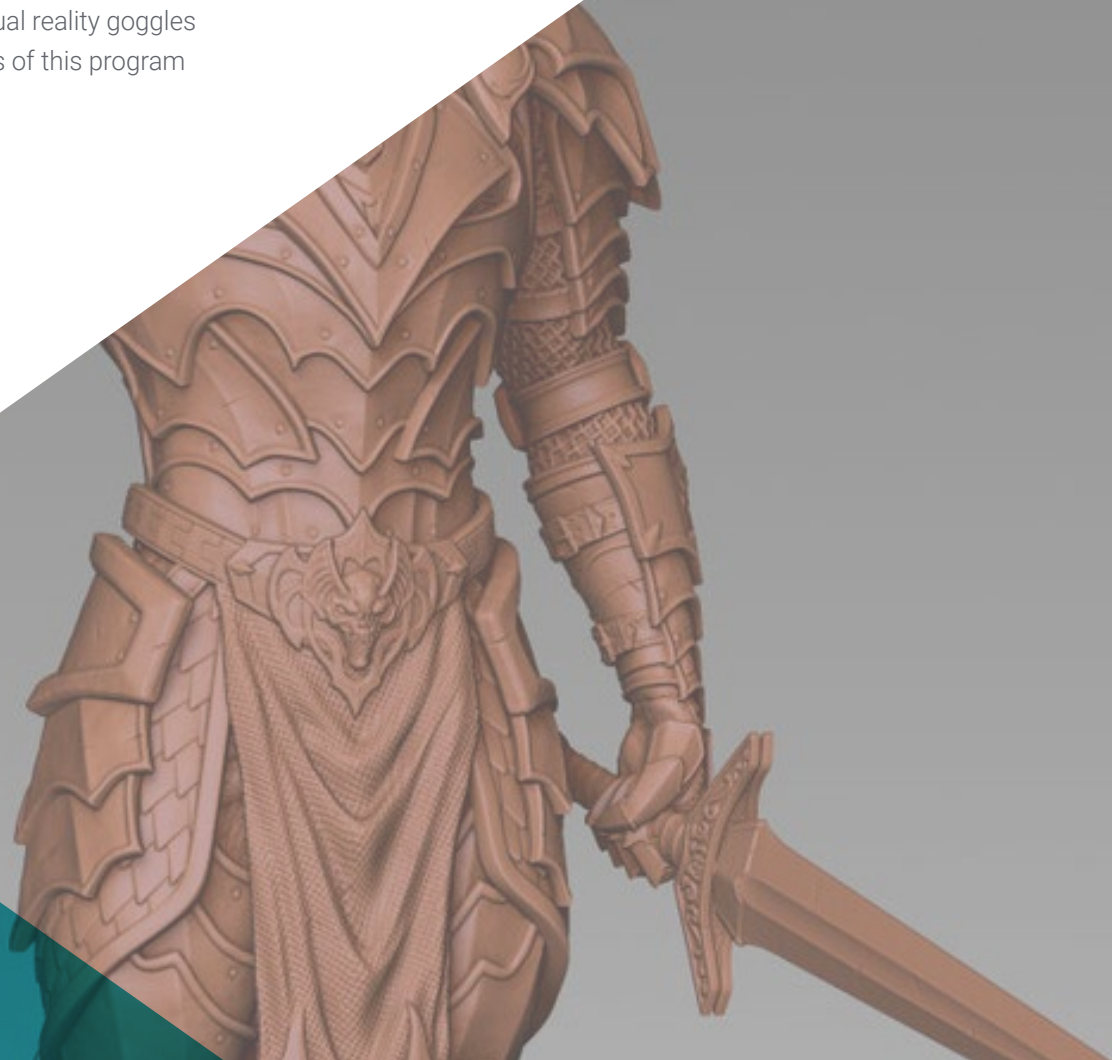### Mr. Sequeros Rodríguez, Salvador

- Freelance 2D/3D modeler and generalist
- Concept Art and 3D Models for Slicecore. Chicago
- Videomapping and modeling, Rodrigo Tamariz. Valladolid
- Professor of Higher-Level Training Cycle in 3D Animation. Higher Education School of Image and Sound ESISV. Valladolid
- Professor of Higher-Level Training Cycle GFGS in 3D Animation. European Institute of Design IED Madrid
- 3D modeling for Las Fallas designers Vicente Martinez and Loren Fandos. Castellón
- Master's Degree in Computer Graphics, Games and Virtual Reality. URJC University. Madrid
- Degree in Fine Arts at the University of Salamanca (specializing in Design and Sculpture).

04
Structure and Content

The contents of this Postgraduate Certificate have been designed in a way that is accessible to the student. You will be able to consult these from the virtual campus as often as necessary. The structure of the units allows for a combination of practical and theoretical aspects, thus speeding up the assimilation of contents. Students will use the latest in modeling and master sculpting programs through virtual reality goggles such as *Quill*. These, among other elements detailed in the syllabus of this program that will allow you to unleash your creativity.

You will be able to pause, review, replay and share each session as many times as you like"

You will have access to forums, meeting rooms and private chats with your faculty, as well as to downloading the syllabus for consultation without an internet connection"

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.

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.

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

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.

01 learning from evidence

02 relearning from evidence

03 testing

04 learning from an expert

05 neurocognitive context dependent learning

06 Von-Restorff effect

07 case based learning through storytelling

08 competencies testing (retesting)

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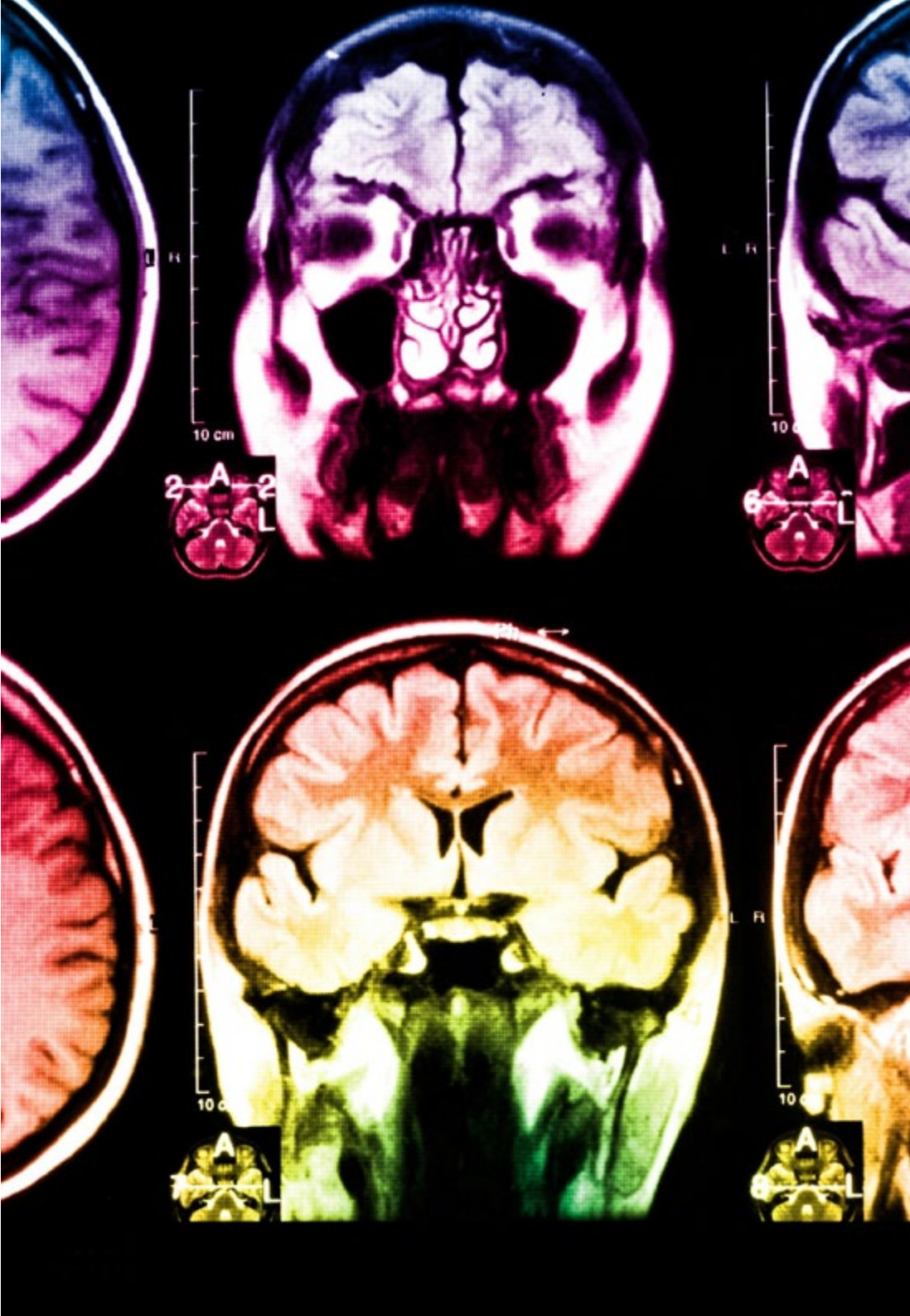
This program offers the best educational material, prepared with professionals in mind:
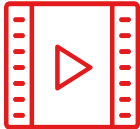
Study Material

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.

30%

10%

8%

20%

25%

4%

3%
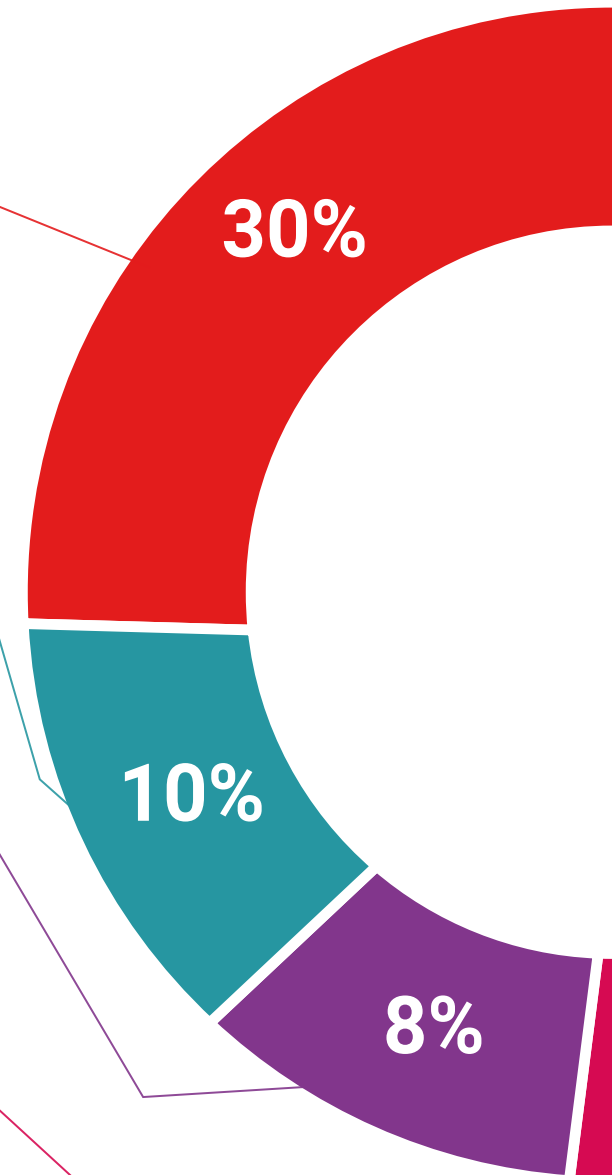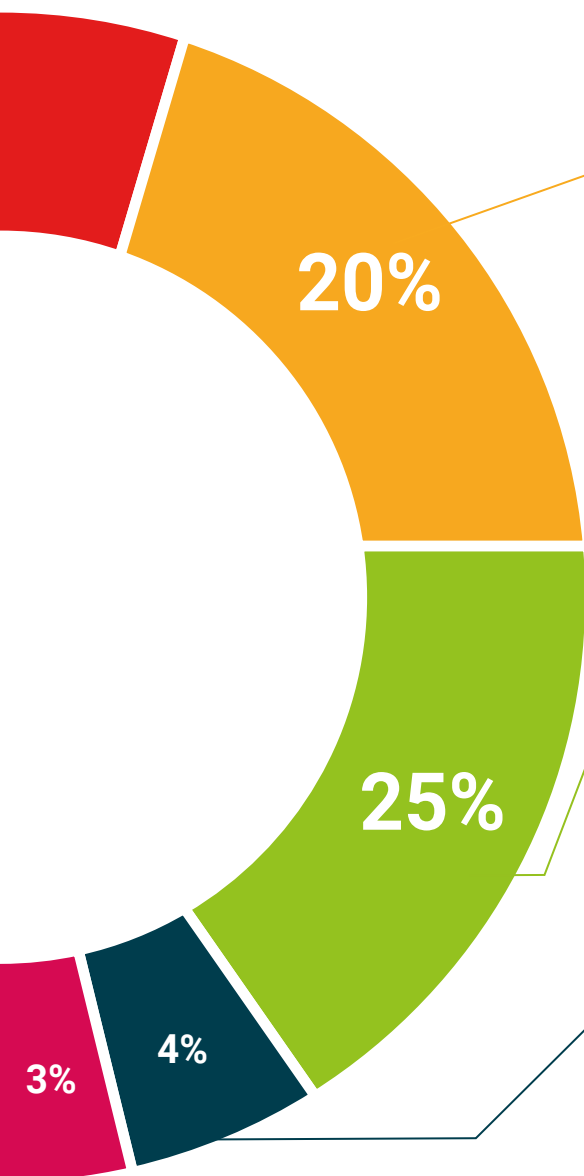
Case Studies

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 Model Lighting, 3D, VR, AR Printing and Photogrammetry guarantees students, in addition to the most rigorous and up-to-date education, access to a qualification issued by TECH Technological University.

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

This **Postgraduate Certificate in Applications of Modeling in 3D Printing, VR, AR and Photogrammetry** contains the most complete and up-to-date program on the market.

After students have 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 Applications of Modeling in 3D Printing, VR, AR and Photogrammetry**

Official Nº of Hours: **150 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.

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