

# Postgraduate Certificate

## 3D Retopology and Maya Modeling





## Postgraduate Certificate 3D Retopology and Maya Modeling

- » 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/3d-retopology-maya-modeling](http://www.techtitute.com/in/design/postgraduate-certificate/3d-retopology-maya-modeling)

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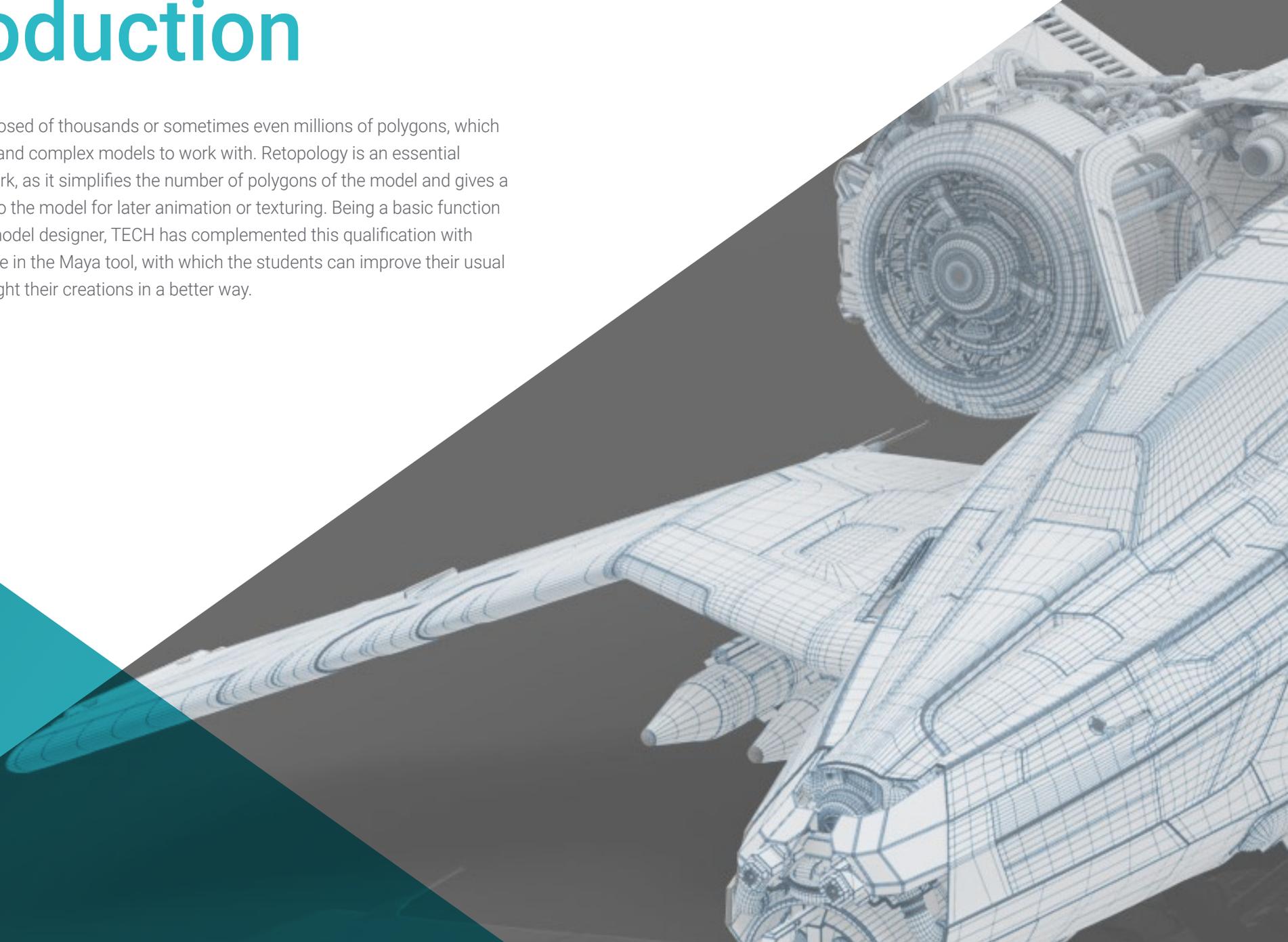
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# 01

# Introduction

A 3D figure is composed of thousands or sometimes even millions of polygons, which makes them heavy and complex models to work with. Retopology is an essential process in all 3D work, as it simplifies the number of polygons of the model and gives a suitable treatment to the model for later animation or texturing. Being a basic function for every good 3D model designer, TECH has complemented this qualification with advanced knowledge in the Maya tool, with which the students can improve their usual workflow and highlight their creations in a better way.





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*You will be a key part of your team by mastering the post-processing of 3D models, with impeccable retopology and sculpting techniques in Maya"*

While it is true that the current 3D modeling tools allow a series of spectacular figures and environments full of details, these works must then be processed correctly in order to be manageable when creating a good texture or rigging with which to animate it.

This process must be well known by the 3D designers, so that their models do not lose the slightest detail when it comes to retopology treatment. To be able to perform this task requires an advanced knowledge of the Maya tool, with which the students must also learn to manage in order to improve their own workflow.

For this reason, TECH has included in this Postgraduate Certificate numerous topics that deal with the use and management of Maya with a more professional and efficient perspective, so that the student not only learns to process their models, but also to create sculptures of higher quality and detail in one of the most widespread pieces of software on the market.

A unique opportunity to improve professional performance and give a quality boost to the career of designers, who will also be able to take this program completely online, without the obligation to attend classes or do a final project, which greatly lightens the teaching load.

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

- ◆ The development of case studies presented by experts in 3D modeling
- ◆ 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
- ◆ Its special emphasis on innovative methodologies
- ◆ Theoretical lessons, questions to the expert, debate forums on controversial topics, and individual reflection assignments
- ◆ Access to content from any fixed or portable device with an Internet connection

“*You will become a better 3D modeling professional thanks to the advanced knowledge you will acquire in this Postgraduate Certificate*”

“

*You have the ease of studying this Postgraduate Certificate from the comfort of your home without having to travel and adapting the study material to your responsibilities and pace”*

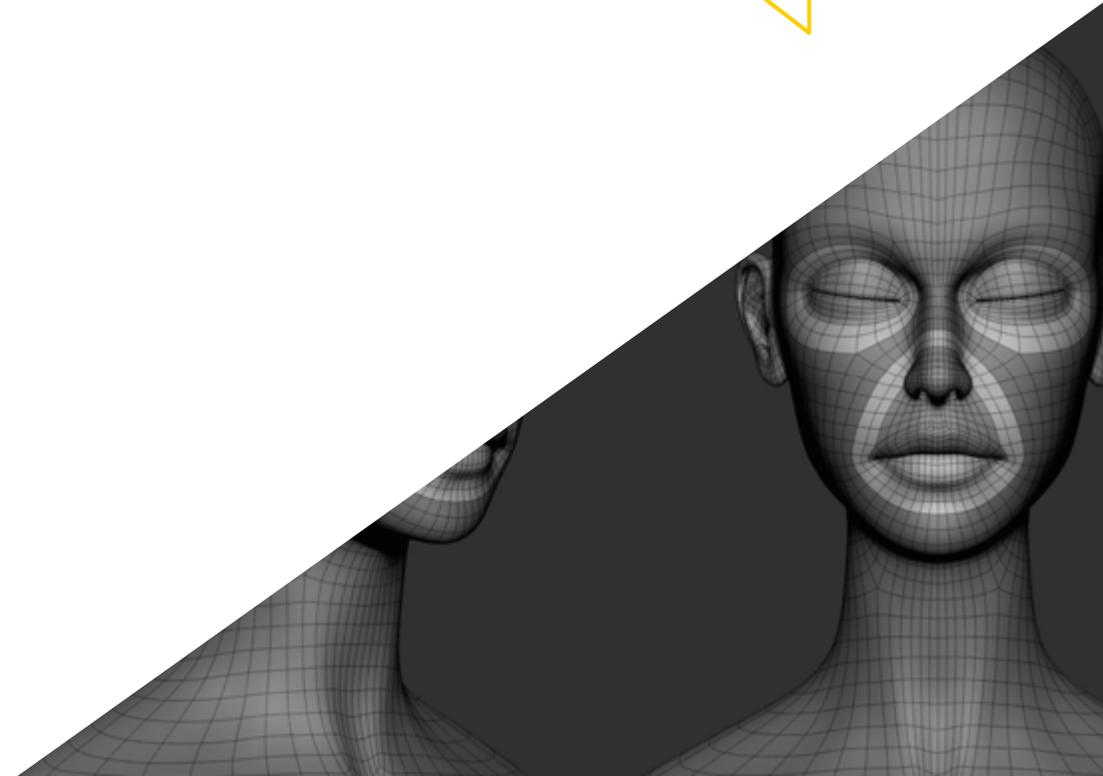
*Enroll today in this TECH Postgraduate Certificate and start improving your professional performance in an essential field of knowledge in 3D modeling.*

*You will acquire models to retain all the details you have compiled thanks to an impeccable processing in Maya.*

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.

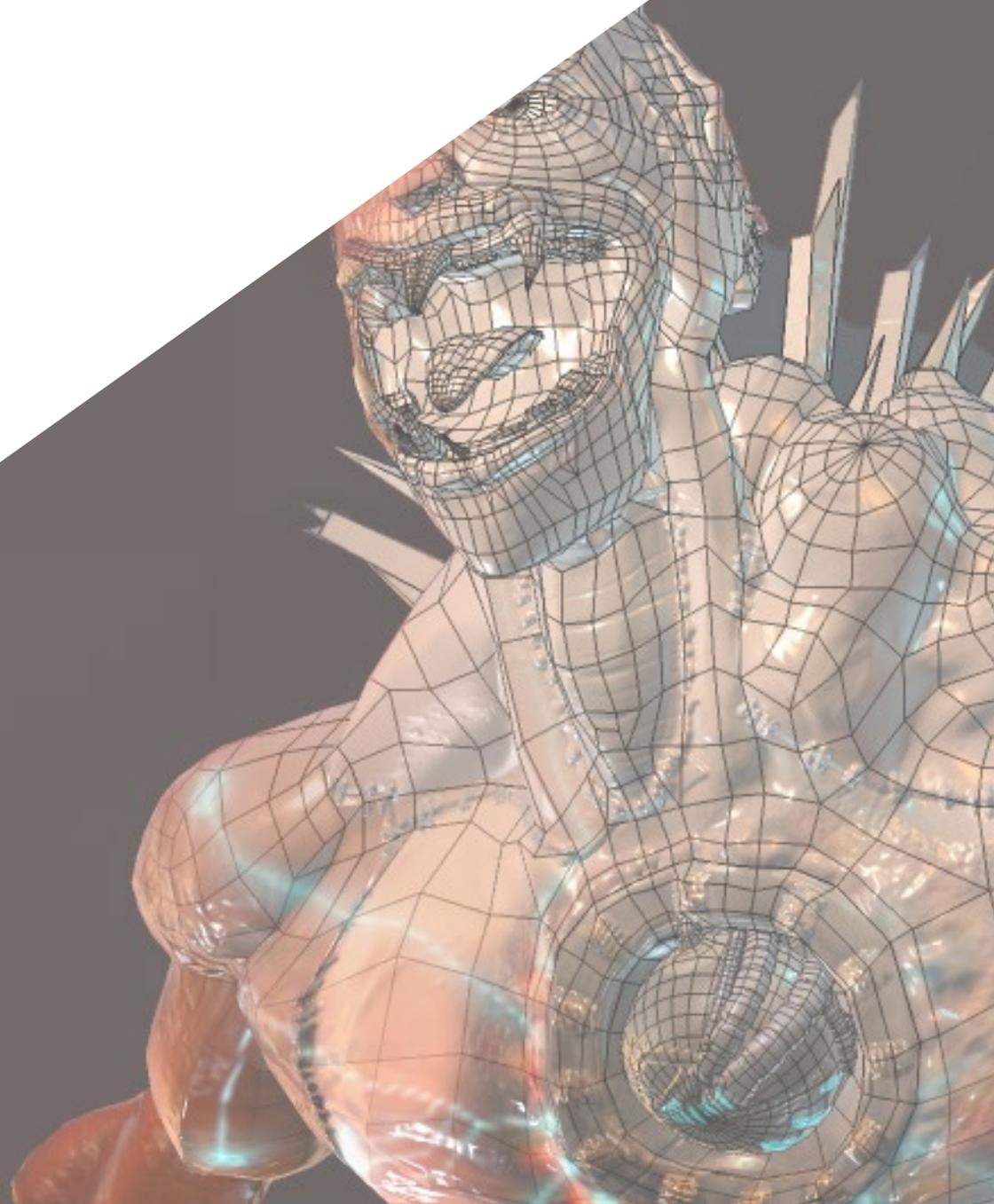
This program is designed around Problem-Based Learning, whereby the professional must try to solve the different professional practice situations that arise throughout the program. This will be done with the help of an innovative system of interactive videos made by renowned experts.



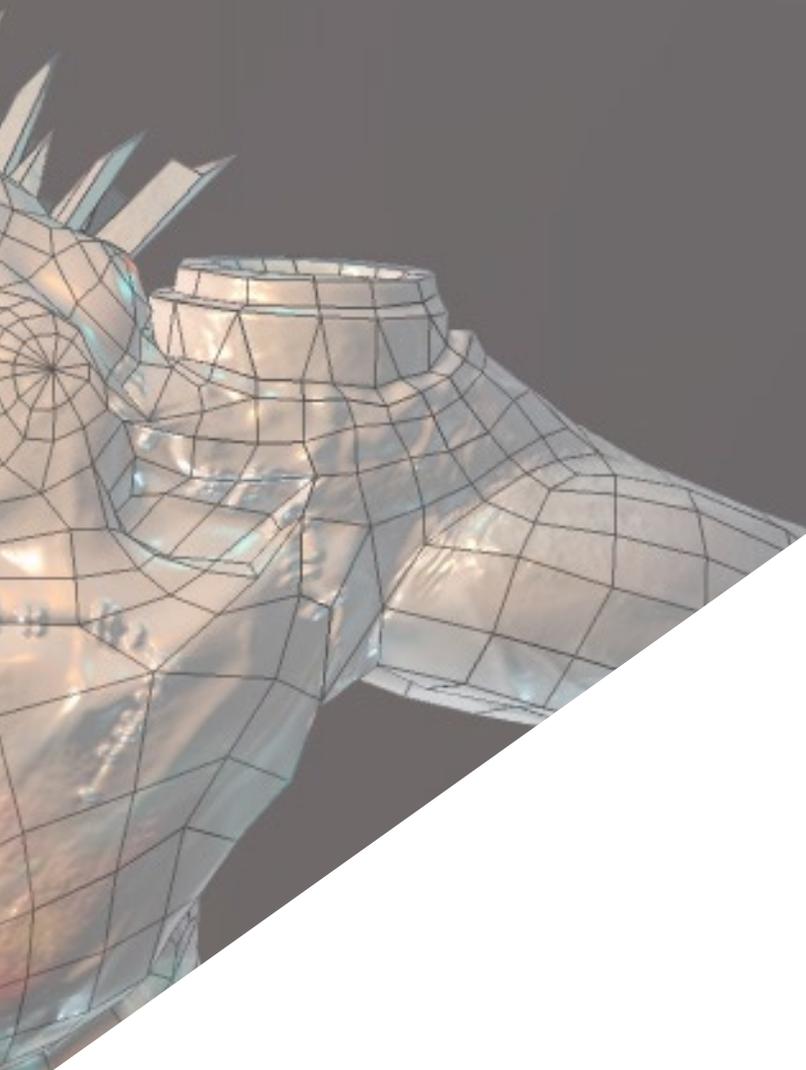
# 02

# Objectives

The objective of this Postgraduate Certificate in 3D Retopology and Maya Modeling is to provide the student with a series of advanced knowledge in the processing of three-dimensional models, with which the future graduate will be able to distinguish themselves within their departments and broaden their own professional perspectives. Thanks to an adequate model treatment, the student will be an essential asset to connect the 3D design department with the animation or texturing departments.







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*Your career goal is very clear. TECH encourages you to achieve this by providing you with distinctive skills that will help you stand out better in the world of 3D design"*

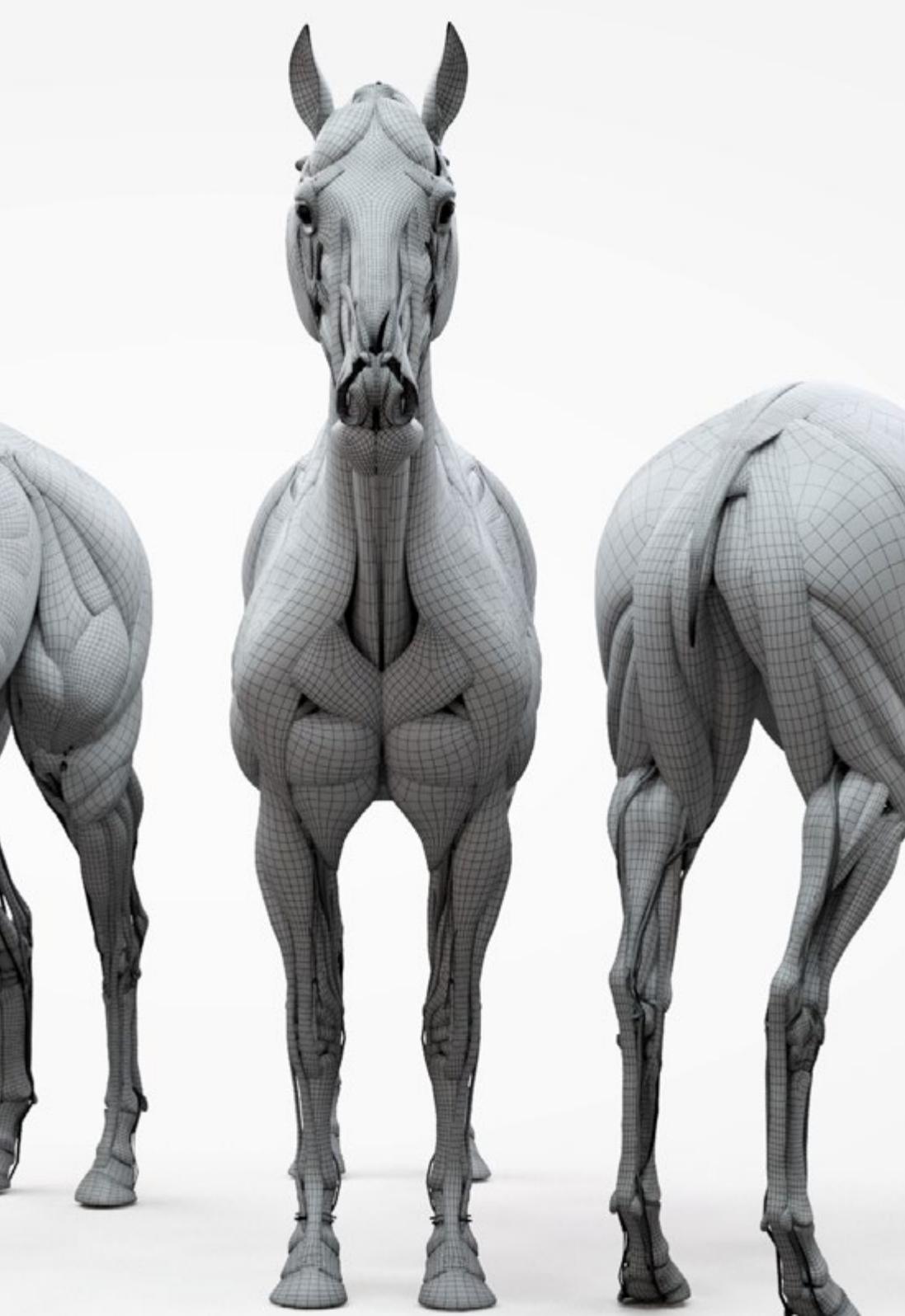


## General Objectives

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- ◆ Expand knowledge of human and animal anatomy in order to develop hyper-realistic creatures
- ◆ Master retopology, UVs and texturing to perfect the models created
- ◆ Create an optimal and dynamic workflow to work more efficiently with 3D modeling
- ◆ Have the skills and knowledge most in demand in the 3D industry to be able to apply for the best jobs





## Specific Objectives

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- ◆ Master the different professional sculpting techniques
- ◆ Create advanced full body and face retopology in Maya
- ◆ Delve into how to apply details using alphas and brushes in ZBrush

“

*This program will be your springboard to greater professional success, teaching you to master Maya as an everyday tool"*

03

# Course Management

The Postgraduate Certificate in 3D Retopology and Maya Modeling has a first-class teaching staff, as their extensive work experience in creating 3D models and performing retopology processes on them will help the student to acquire all the knowledge they need to become a true expert in the field. Additionally, students have access to first-class counseling, and can consult any type of doubt or problem directly with the faculty.

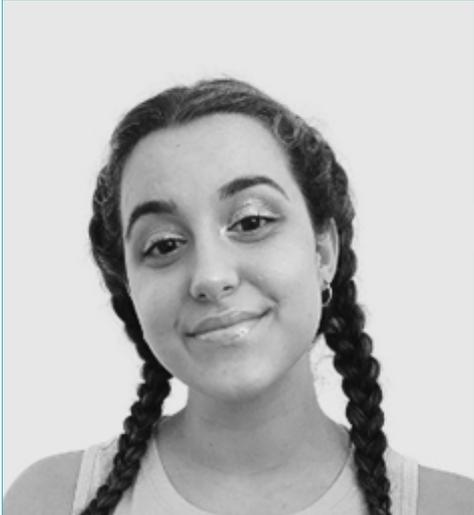




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*You are guaranteed to learn from the best possible teachers, who will teach you all the secrets of Maya and 3D retopology”*

## Management



### Ms. Gómez Sanz, Carla

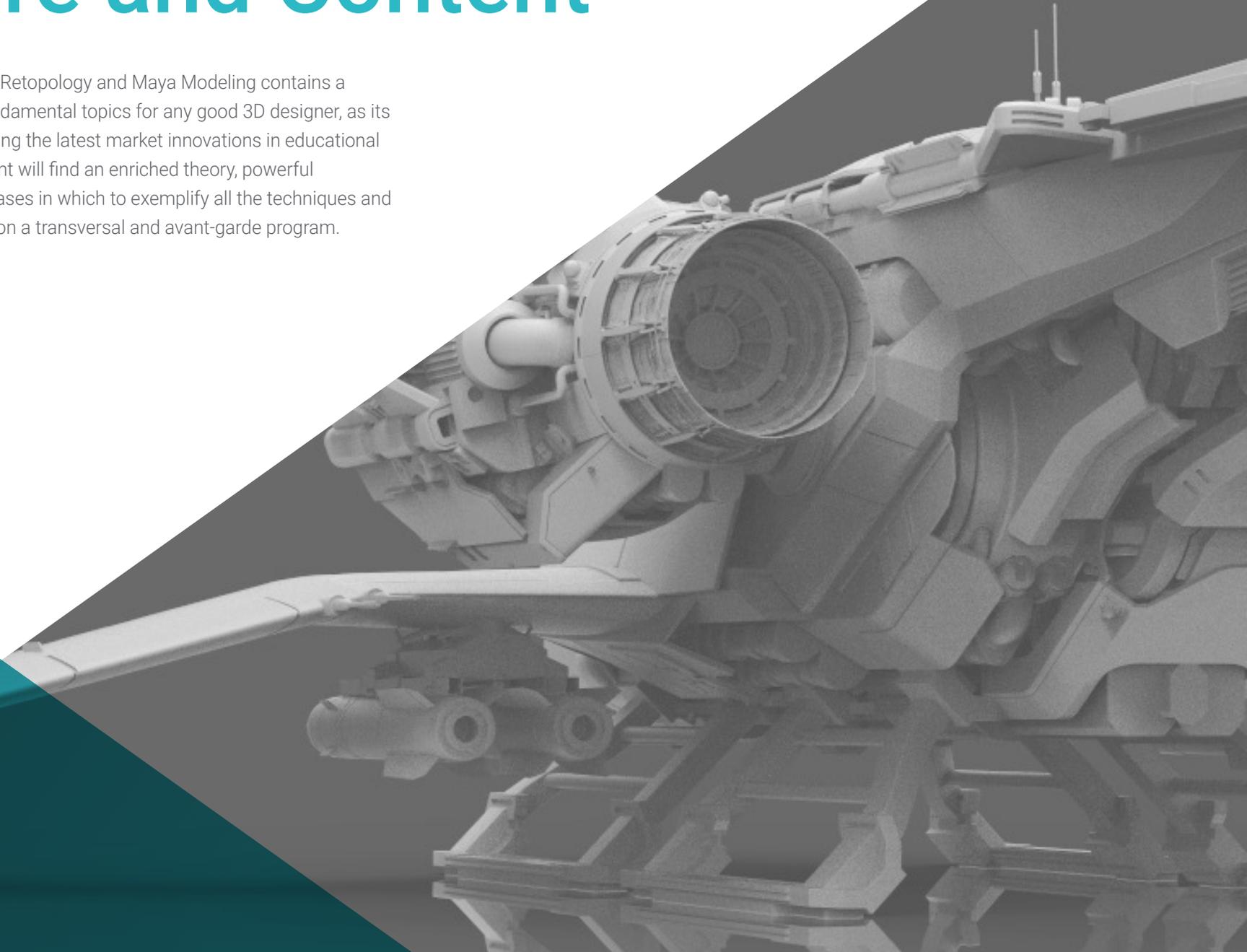
- ♦ 3D Generalist at Blue Pixel 3D
- ♦ Concept Artist, 3D Modeler, Shading in Timeless Games Inc
- ♦ Collaboration with multinational consulting firm for the design of vignettes and animation for commercial proposals
- ♦ Advanced Technician in 3D Animation, video games and interactive environments at CEV School of Communication, Image and Sound
- ♦ Master's Degree and Bachelor's Degree in 3D Art, Animation and Visual Effects for video games and cinema at CEV School of Communication, Image and Sound



# 04

# Structure and Content

This Postgraduate Certificate in 3D Retopology and Maya Modeling contains a complete syllabus on these two fundamental topics for any good 3D designer, as its structure has been designed following the latest market innovations in educational methodology. In this way, the student will find an enriched theory, powerful audiovisual support and practical cases in which to exemplify all the techniques and skills taught, making this qualification a transversal and avant-garde program.





“

*This is your best opportunity to distinguish yourself in the world of 3D modeling, with knowledge that will undoubtedly position you prominently in the professional market”*

## Module 1. 3D Retopology and Maya Modeling

- 1.1. Advanced Facial Retopology
  - 1.1.1. Importing into Maya and the Use of Quad Draw
  - 1.1.2. Retopology of the Human Face
  - 1.1.3. Loops
- 1.2. Human Body Retopology
  - 1.2.1. Creation of Loops in the Joints
  - 1.2.2. Ngons and Tris and When to Use Them
  - 1.2.3. Topology Refinement
- 1.3. Retopology of Hands and Feet
  - 1.3.1. Movement of Small Joints
  - 1.3.2. Loops and Support Edges to Improve the Base Mesh of Feet and Hands
  - 1.3.3. Difference of Loops for Different Hands and Feet
- 1.4. Differences Between Maya Modeling vs. ZBrush Sculpting
  - 1.4.1. Different Workflows for Modeling
  - 1.4.2. Low Poly Base Model
  - 1.4.3. High Poly Model
- 1.5. Creation of a Human Model from Scratch in Maya
  - 1.5.1. Human Model Starting From the Hip
  - 1.5.2. General Base Form
  - 1.5.3. Hands and Feet and their Topology
- 1.6. Transformation of Low Poly Model to High Poly
  - 1.6.1. ZBrush
  - 1.6.2. High Poly: Differences Between Divide and Dynamesh
  - 1.6.3. Sculpting Form: Alternation Between Low Poly and High Poly



- 1.7. Application of Details in ZBrush: Pores, Capillaries, etc.
  - 1.7.1. Alphas and Different Brushes
  - 1.7.2. Detail: Dam-Standard Brush
  - 1.7.3. Projections and Surfaces in ZBrush
- 1.8. Advanced Eye Creation in Maya
  - 1.8.1. Creation of the Spheres: Sclera, Cornea and Iris
  - 1.8.2. Lattice Tool
  - 1.8.3. Displacement Map from ZBrush
- 1.9. Use of Deformers in Maya
  - 1.9.1. Maya Deformers
  - 1.9.2. Topology Movement: Polish
  - 1.9.3. Polishing of the Final Mesh
- 1.10. Creation of Final UVs and Application of Displacement Mapping
  - 1.10.1. Character UVs and Importance of Sizes
  - 1.10.2. Texturing
  - 1.10.3. Displacement Map

“*With a syllabus as complete as this one, it won't take you long to master retopology and streamline the production processes of all your projects”*



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

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.

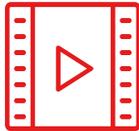
*Relearning will allow you to learn with less effort and better performance, involving you more in your training, developing a critical mindset, defending arguments, and contrasting opinions: a direct equation for success.*

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.



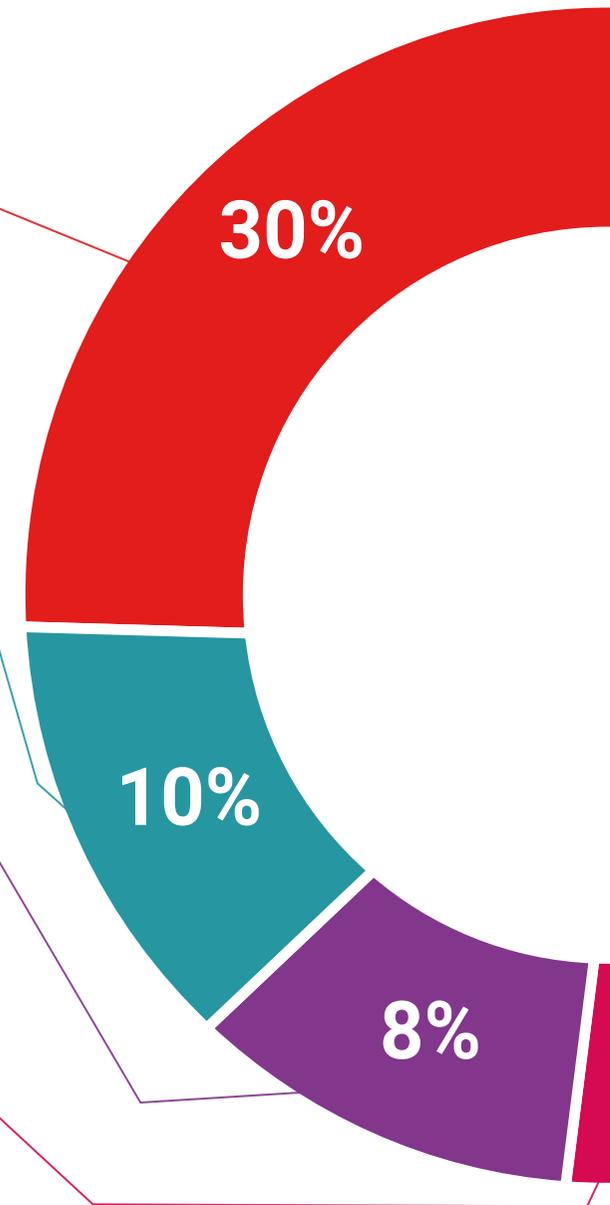
### Practising Skills and Abilities

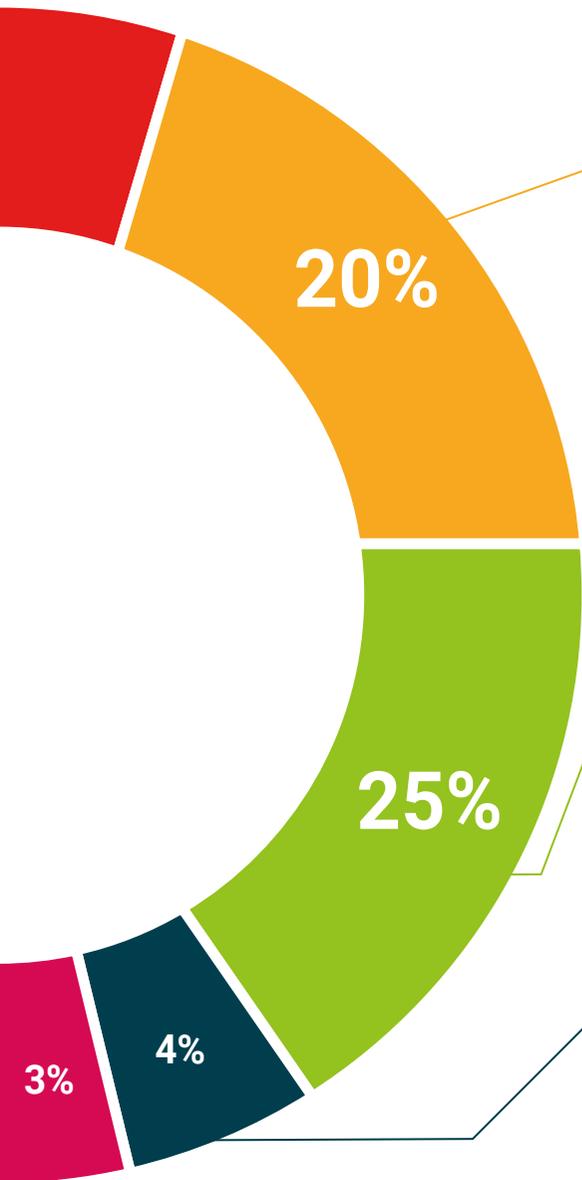
They will carry out activities to develop specific competencies and skills in each thematic area. Exercises and activities to acquire and develop the skills and abilities that a specialist needs to develop in the context of the globalization that we are experiencing.



### 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 Certificate in 3D Retopology and Maya Modeling guarantees students, in addition to the most rigorous and up-to-date education, access to a Postgraduate Certificate 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 3D Retopology and Maya Modeling** 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 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 3D Retopology and Maya Modeling**

Official N° 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.

future

health confidence people

education information tutors

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institutions technology learning

community commitment

personalized service innovation

knowledge present

online training

development language

virtual classroom

**tech** technological  
university

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