Postgraduate Diploma
Polygonal Modeling in 3ds Max

tech global university

Postgraduate Diploma
Polygonal Modeling
in 3ds Max

- » Modality: **online**
- » Duration: **6 months**
- » Certificate: **TECH Global University**
- » Credits: **18 ECTS**
- » Schedule: **at your own pace**
- » Exams: **online**

Website: **www.techtitute.com/us/design/postgraduate-diploma/postgraduate-diploma-polygonal-modeling-3ds-max**

Index

01
Introduction

For several years, urban planners, architects, designers, engineers, among others, have used the 3ds Max program to bring the idea of their projects to reality, taking care of every little detail. In this sense, polygonal modeling is widely used, which turns out to be very flexible and easy to render. Therefore, in this 100% online program, the student will be able to acquire extensive knowledge in the use of this technique with the most advanced software on the market. This way, from anywhere in the world and at any time you need, you can learn how to smooth with meshes, transform objects and create complex shapes from simpler ones.
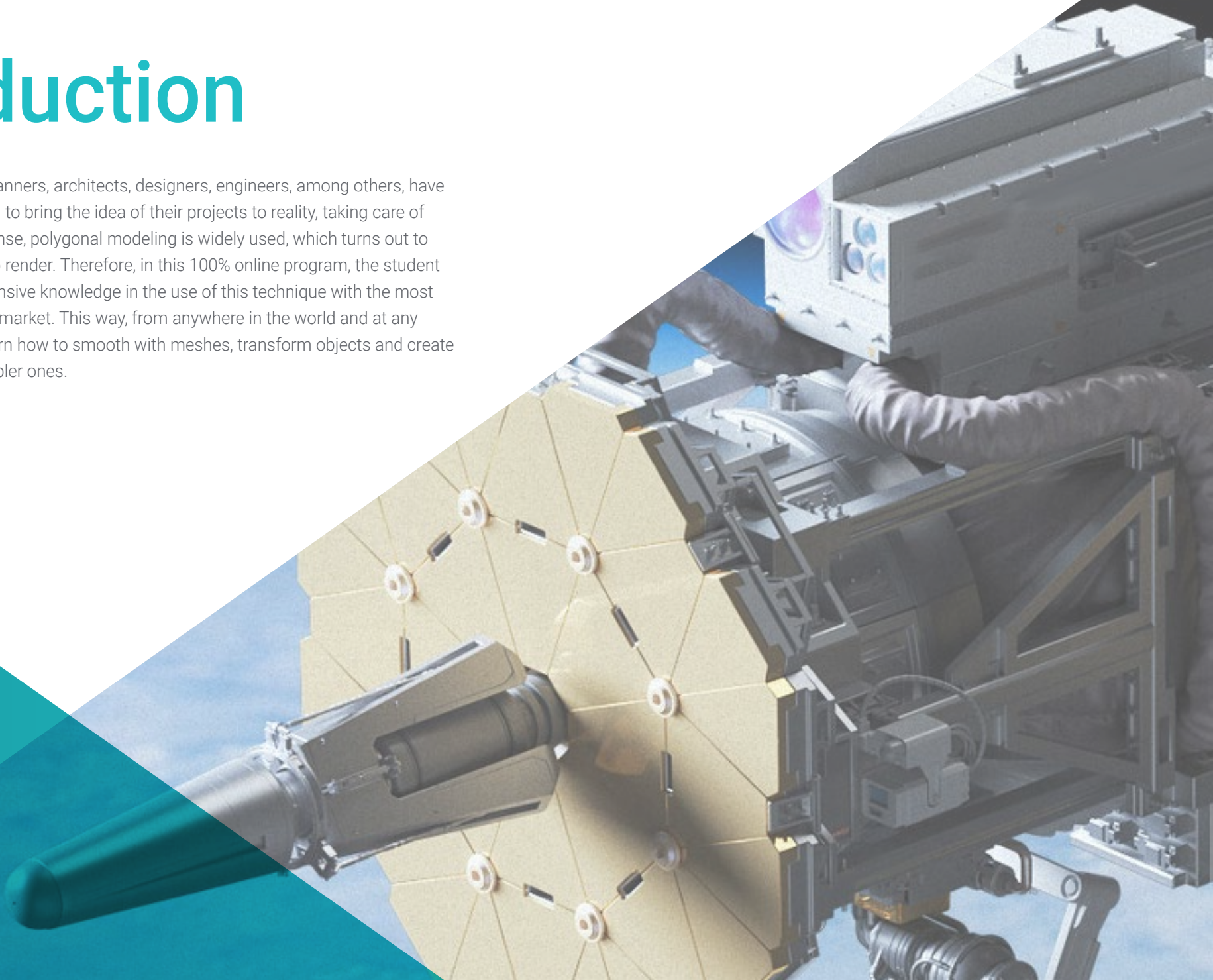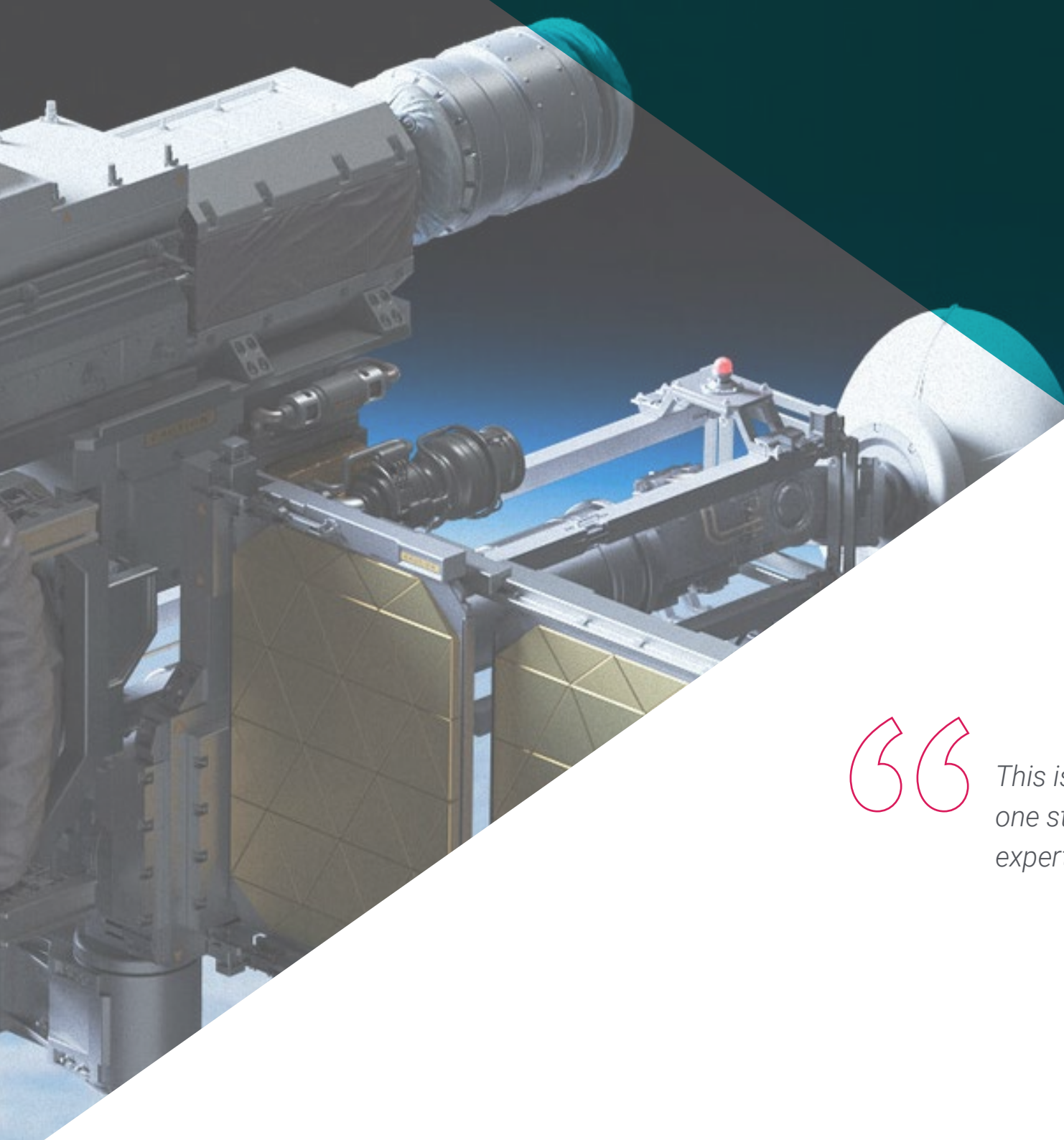
This is the perfect time to go one step further and become an expert in polygonal modeling"

There are an infinite number of techniques in 3D modeling, but polygonal models are widely used due to their processing speed and accuracy in detail definition. Therefore, it is essential to know in detail the basics of this technique, being able to apply it in the 3ds Max program.

In this Postgraduate Diploma, students will find a complete program that meets their needs, thanks to its 100% online format, which will allow them to learn at their own pace and at the time that best suits them. In this way, you will be able to specialize in the configuration of your workspace in 3ds Max, analyze various complete models and apply polygonal modeling techniques to solve details of your designs.

Likewise, you will receive education on the operation of the parts of a machine. This will be essential to perform future animation with a high degree of realism and optimize any model. All this, thanks to the content that a group of experts has developed taking into account the demands of the sector and their extensive experience in this type of work. Therefore, the graduating students will be able to position themselves at the top of their careers.

This **Postgraduate Diploma in Polygonal Modeling in 3ds Max** 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 in Hardsurface
- 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
- Content that is accessible from any fixed or portable device with an Internet connection

This program stands out for its innovative content, elaborated following the parameters of the most important educational methodology in digital education: Relearning"

This program contains several practical exercises to help you become familiar with 3ds Max and the polygonal modeling technique"

You will be able to create complex shapes from simpler ones, after completing this syllabus.

A different way of learning, adapted to your needs thanks to its 100% online format that TECH has designed.

The program's teaching staff includes professionals from the 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.

02
Objectives

The main objective of this Postgraduate Diploma is clear and concise: to provide the student with a solid knowledge of polygonal modeling. To do this, you will have a comprehensive program that covers all the aspects you need to make machine parts or the design of a building using 3ds Max software. In this way, you will be able to enter a booming sector and exponentially improve your work.

" *By completing this program, you will be able to open a space for yourself in the world of 3D modeling, allowing you to work independently on any project"*

General Objectives

- Learn in depth the different types of hardsurface modeling, the different concepts and features to apply them in the 3D modeling industry.
- Delve into the theory of shape creation in order to develop Shape Masters.
- Learn in detail the basics of 3D modeling in its different forms.
- Generate designs for different industries and their application
- Be a technical expert and/or Artist in 3D modeling for Hard surface
- Know all the tools involved in the 3D modeling profession.
- Acquire skills for the development of textures and FX of 3D models.

Reach your best version, and specialize in one of the most demanded techniques in the world of 3D modeling"
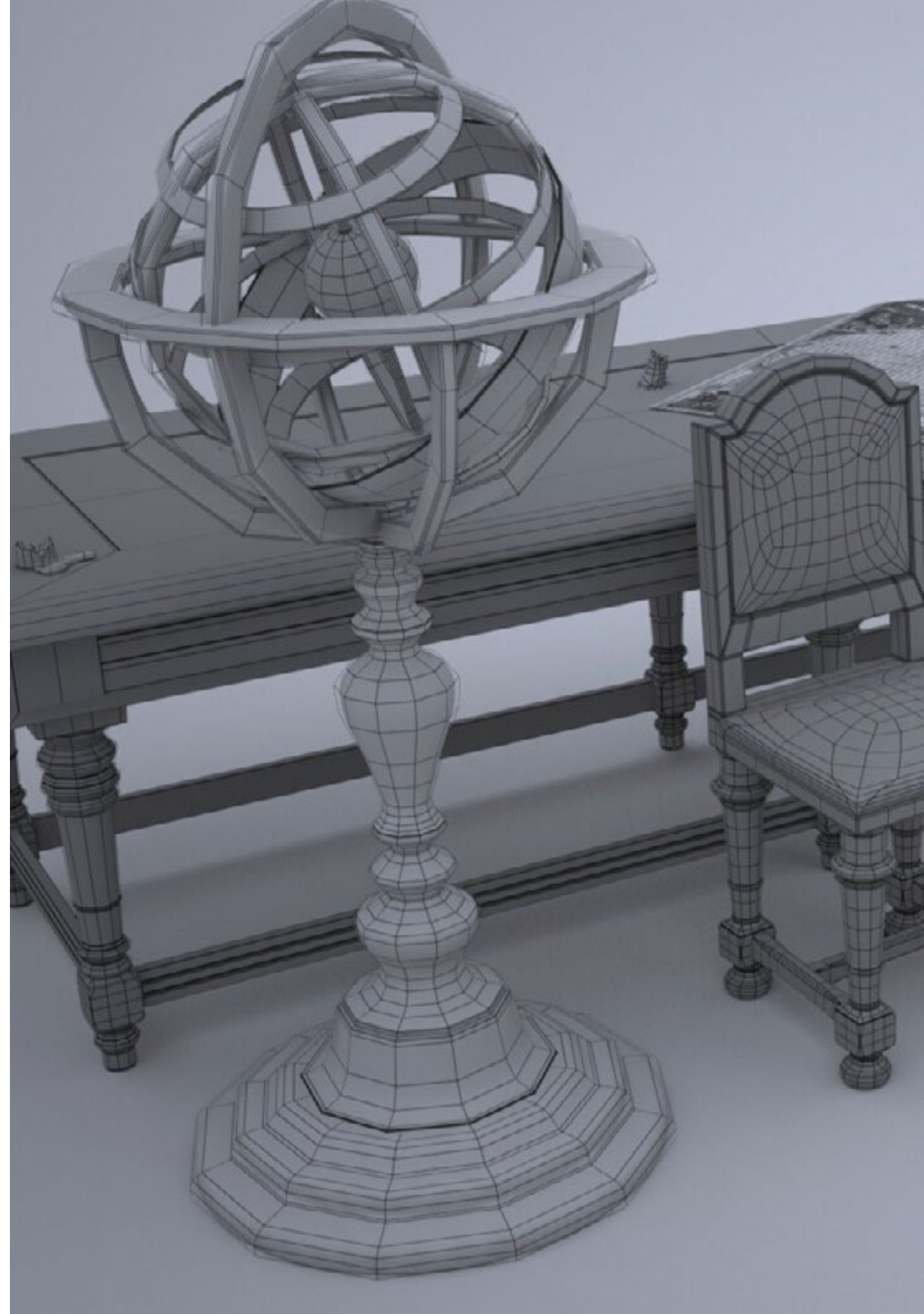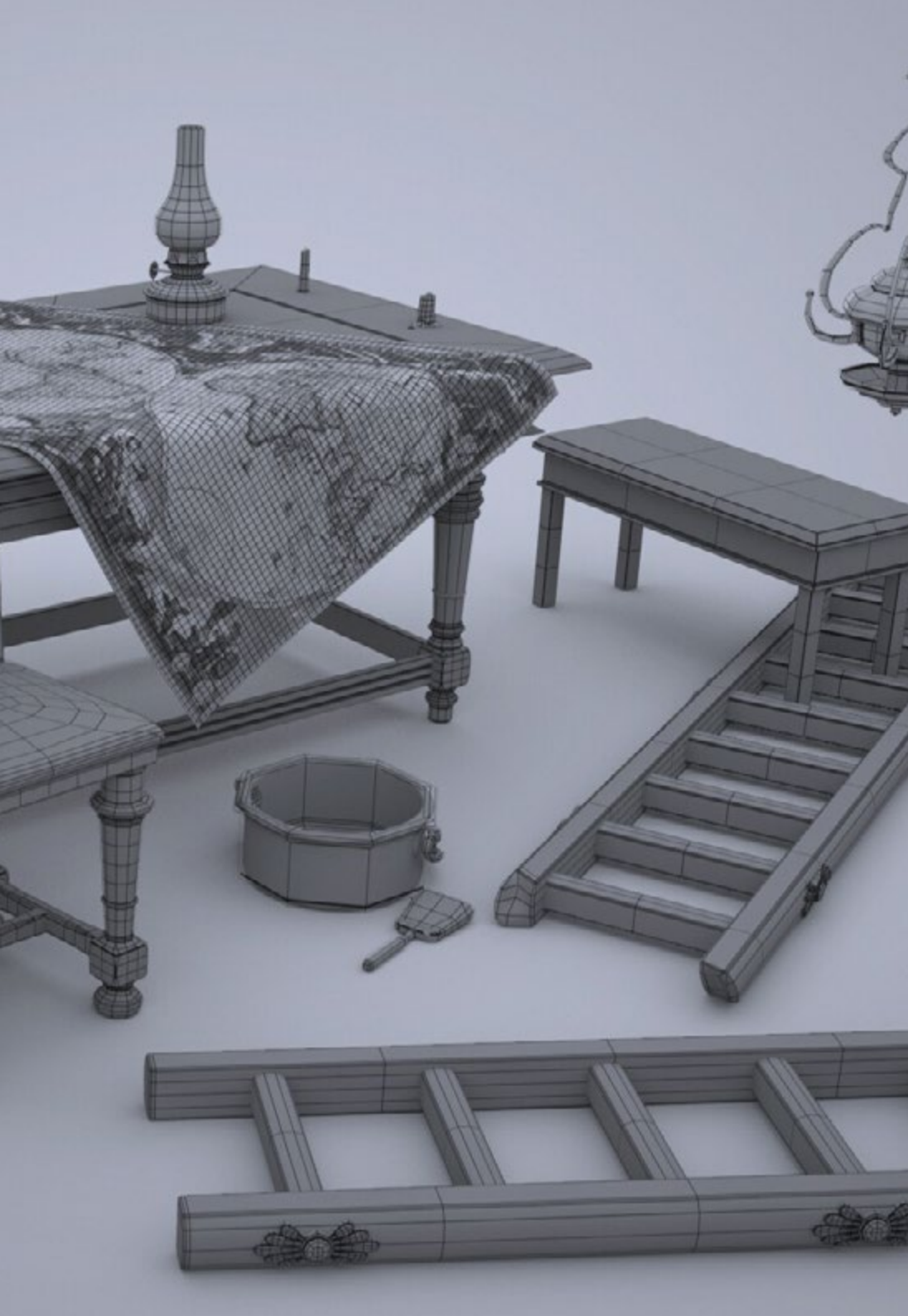
Specific Objectives

Module 1. Introduction to Polygonal Modeling in 3D Studio Max

- Possess extensive knowledge of using 3D Studio Max
- Work with custom settings
- Have an in-depth understanding of how mesh smoothing works
- Conceive geometries through a variety of methods
- Develop an understanding of how a mesh behaves
- Apply object transformation techniques
- Have knowledge of creating UV maps

Module 2. Advanced Polygonal Modeling in 3D Studio Max

- Apply all the techniques for specific product development
- In-depth understanding of component parts development
- Understand the topology of an aircraft in modeling in depth
- Apply knowledge of technical components
- Create complex shapes through the development of simple shapes
- Understand the physiognomy of a bot form

Module 3. Low Poly 3D Studio Max Modeling

- Working with basic shapes for mechanical models
- Develop the ability to decompose elements
- Understand in depth how detail makes for realism
- Solve different techniques to develop details
- Understand how mechanical parts are connected

03
Course Management

The teaching staff of this Postgraduate Diploma is formed by a group of professionals with extensive experience in the design and modeling sector. They have been in charge of elaborating the syllabus to the millimeter and developing the various exercises and practical videos to reinforce the knowledge obtained in each class. Their extensive experience in the world of modeling enables them to help students to position themselves as top level designers in this highly competitive sector.

TECH has the best teachers and professionals to help you continue your professional path in the world of 3D modeling"

Management

Mr. Salvo Bustos, Gabriel Agustín

- Aeronautical 3D modeling experience
- 3D Artist at 3D VISUALIZATION SERVICE INC
- 3D Production for Boston Whaler
- 3D Modeler at Shay Bonder Multimedia TV Production Company
- Audiovisual Producer at Digital Film
- Product Designer for Escencia de los Artesanos by Eliana M
- Industrial Designer, Specializing in Products, National University of Cuyo, Argentina
- Honorable Mention in Mendoza Late Contest
- Exhibitor at the Regional Visual Arts Salon Vendimia
- Digital Composition Seminar, National University of Cuyo, Argentina
- National Congress of design and production. C.P.R.O.D.I
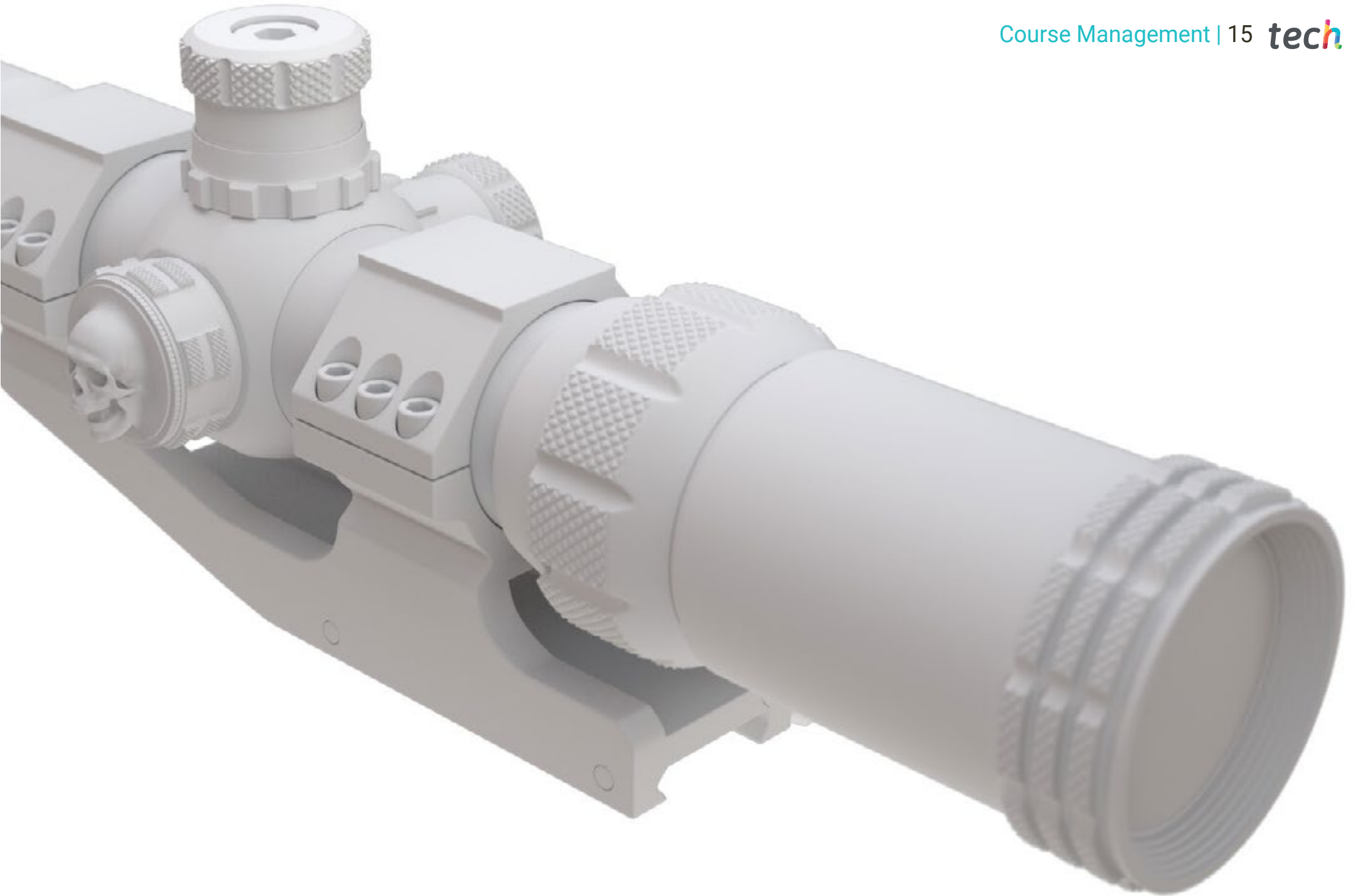
Structure and Content

This Postgraduate Diploma in Polygonal Modeling in 3ds Max has a comprehensive and up to date syllabus, which covers all aspects to be a professional in this sector. The student will learn how to configure the software properly to work with meshes or UV *Maps*. Likewise, they will be able to understand how the parts of a machine work in order to recreate them in their projects. All this, available online and following the methodology that TECH has perfected over the years: *Relearning*.

"

A unique opportunity to create realistic mechanical parts, using the polygonal modeling technique"

Module 1. Polygonal Modeling in 3D Studio Max

1.1. 3D Studio Max
1.1.1. 3dsmax Interface
1.1.2. Custom Settings
1.1.3. Modeling with Primitives and Deformers
1.2. Reference Modeling
1.2.1. Reference Image Creation
1.2.2. Hard Surface Smoothing
1.2.3. Scene Organization
1.3. High Resolution Meshing
1.3.1. Basic Smoothed Modeling and Smoothing Groups
1.3.2. Modeling with Extrusions and Bevels
1.3.3. Using the Turbosmooth Modifier
1.4. Spline Modeling
1.4.1. Modifying Curvatures
1.4.2. Configuring Polygon Faces
1.4.3. Extruding and Spherizing
1.5. Creating Complex Shapes
1.5.1. Setting Up Components and Work Grid
1.5.2. Duplicating and Welding Components
1.5.3. Cleaning Polygons and Smoothing
1.6. Modeling With Edge Cuts
1.6.1. Creating and Positioning the Template
1.6.2. Making Cuts and Cleaning Topology
1.6.3. Extruding Shapes and Creating Folds
1.7. Modeling from *Low Poly* Model
1.7.1. Starting with the Basic Shape and Adding Chamfers
1.7.2. Adding Subdivisions and Generating Edges
1.7.3. Cutting, Welding and Detailing
1.8. Edit Poly I Modifier
1.8.1. Workflows
1.8.2. Interface
1.8.3. *Sub Objects*

1.9. Creating Compounds Objects
1.9.1. *Morph, Scatter, Conform and Connect Compound Objects*
1.9.2. *BlobMesh, ShapeMerge and Boolean Compound Objects*
1.9.3. *Loft, Mesher and Proboolean Compound Objects*
1.10. Techniques and Strategies to Create UVs
1.10.1. Simple Geometries and Arc-Like Geometries
1.10.2. Hard Surfaces
1.10.3. Examples and Applications

Module 2. Advanced Polygonal Modeling in 3D Studio Max

2.1. Sci-Fi spacecraft Modeling
2.1.1. Creating our Workspace
2.1.2. Starting with the Main Body
2.1.3. Configuration for the Wings
2.2. The Cabin
2.2.1. Development of the Cabin Area
2.2.2. Modeling the Control Panel
2.2.3. Adding Details
2.3. The Fuselage
2.3.1. Defining Components
2.3.2. Adjusting Minor Components
2.3.3. Developing the Underbody Panel
2.4. The Wings
2.4.1. Creation of the Main Wings
2.4.2. Incorporation of the Tail
2.4.3. Adding Inserts for the Ailerons
2.5. Main Body
2.5.1. Separation of Parts into Components
2.5.2. Creating Additional Panels
2.5.3. Incorporating the Spring Doors
2.6. The Engines
2.6.1. Creating the Space for the Engines
2.6.2. Building the Turbines
2.6.3. Adding the Exhaust

Module 3. *Low Poly* 3D Studio Max Modeling

In six months, you will be an expert in polygonal modeling, thanks to this program developed by the best in the industry"

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:
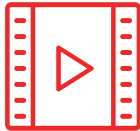
Study Material

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 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.

30%

10%

8%

20%

25%

4%

3%
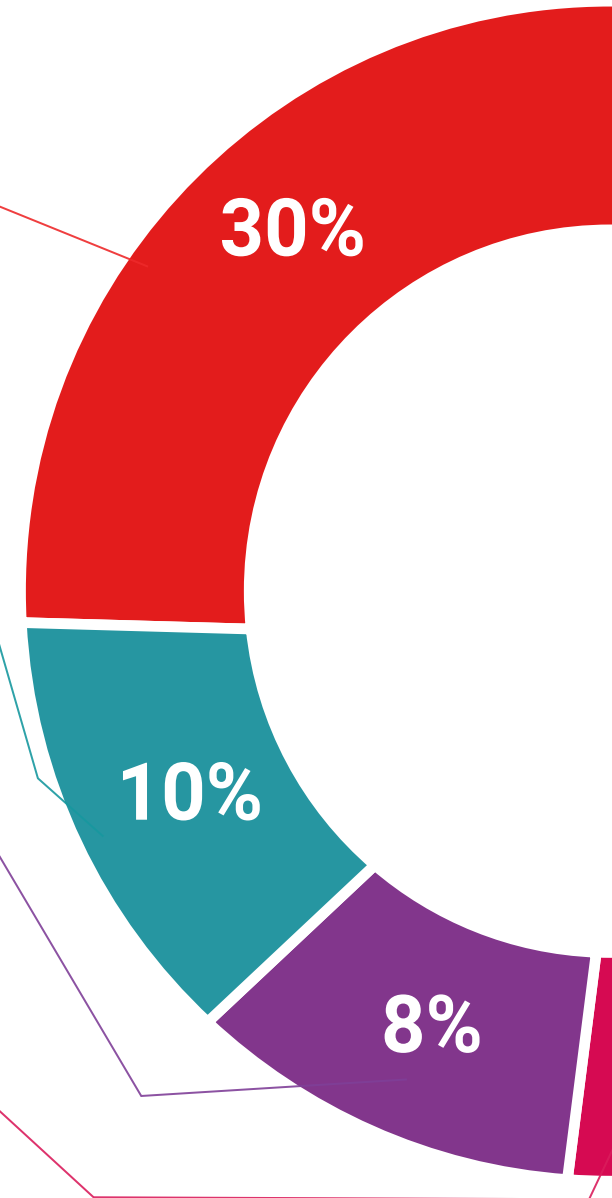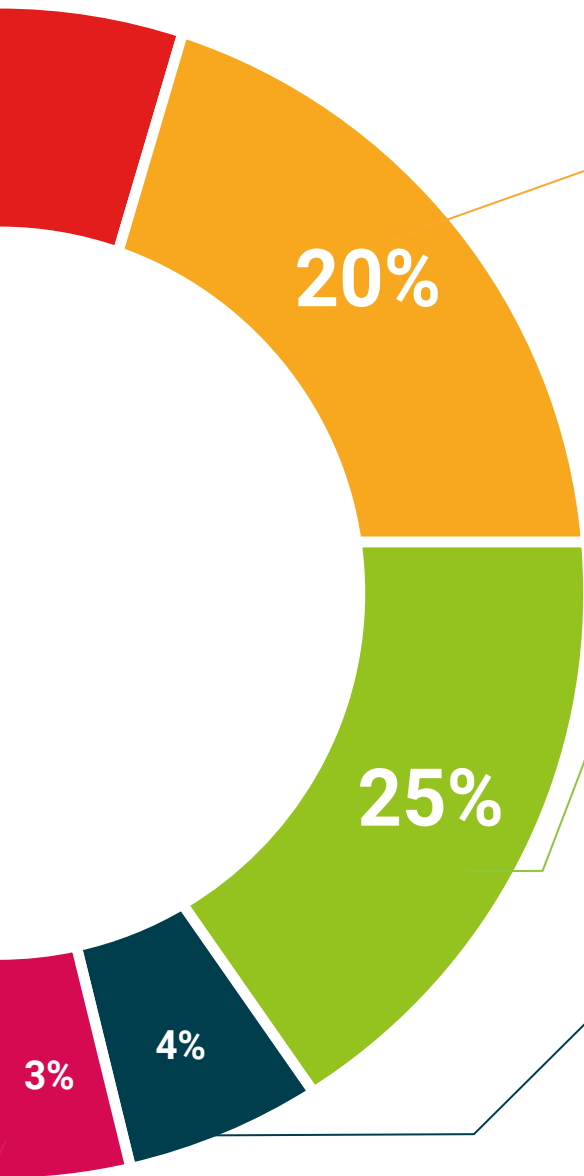
Case Studies

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 Diploma in Polygonal Modeling in 3ds Max guarantees students, in addition to the most rigorous and up-to-date education, access to a Postgraduate Diploma issued by TECH Global University.

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 Diploma in Polygonal Modeling in 3ds Max** 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.
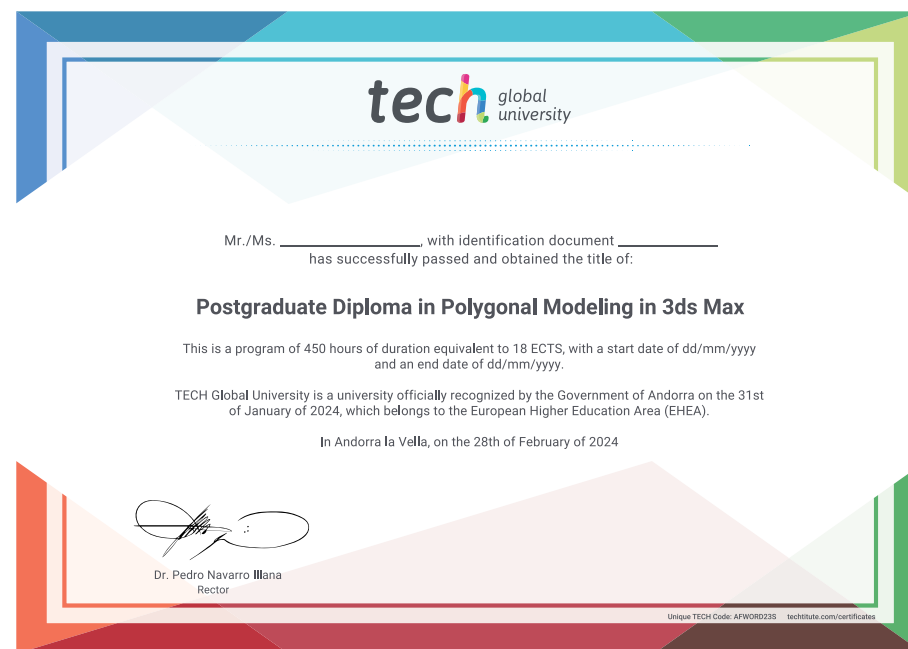
This **TECH Global University** title is a European program of continuing education and professional updating that guarantees the acquisition of competencies in its area of knowledge, providing a high curricular value to the student who completes the program.

Title: **Postgraduate Diploma in Polygonal Modeling in 3ds Max**

Modality: **online**

Duration: **6 months**

Accreditation: **18 ECTS**

tech global university

Mr./Ms. _____, with identification document _____
has successfully passed and obtained the title of:

Postgraduate Diploma in Polygonal Modeling in 3ds Max

This is a program of 450 hours of duration equivalent to 18 ECTS, with a start date of dd/mm/yyyy and an end date of dd/mm/yyyy.

TECH Global University is a university officially recognized by the Government of Andorra on the 31st of January of 2024, which belongs to the European Higher Education Area (EHEA).

In Andorra la Vella, on the 28th of February of 2024

Dr. Pedro Navarro Illana
Rector

Unique TECH Code: AFWORD23S   techtitute.com/certificates

*Apostille Convention. In the event that the student wishes to have their paper diploma issued with an apostille, TECH Global University will make the necessary arrangements to obtain it, at an additional cost.

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