

# Postgraduate Diploma Rhino Modeling





## Postgraduate Diploma Rhino Modeling

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

Website: [www.techtitute.com/us/information-technology/postgraduate-diploma/postgraduate-diploma-rhino-modeling](http://www.techtitute.com/us/information-technology/postgraduate-diploma/postgraduate-diploma-rhino-modeling)

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# 01

# Introduction

The evolution of the three-dimensional modeling software Rhinoceros is remarkable in the field of 3D design, since its invention in the 90s until today, many fields have incorporated this tool to develop their modeling: designers, architects and engineers, animators and many others. This evolution has produced that this tool is recycled and consolidated with updates and new versions, so it is essential to have a knowledge and mastery of it if you want to direct your professional career to any of these fields. This fully online educational program is focused on enabling students to design with Rhino in any field required.







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*Learn how to model with the latest  
and most updated versions of  
Rhinoceros software”*

This Postgraduate Diploma in Modeling with Rhino is designed to enable the Rhino user to create, edit, analyze, document and render any model. The content includes a series of practical exercises to become familiar with the interface, delve into the fundamentals of technical modeling and develop designs from start to finish. Students will also learn how to execute different commands and edit geometric transformations.

Secondly, the educational plan continues with a tour of the most complex tools of the software, as well as analyzing, correcting and solving specific cases in modeling and incorporating important aspects of mechanics to develop more realistic models. Finally, we will work on advanced modeling techniques, where different objects will be developed, such as a tire, brakes, engine, mechanical bodies, among others.

This Postgraduate Diploma is offered in a completely online format, with all the educational material and study resources available on the virtual platform, so that the students can do it comfortably, wherever and whenever they wish, and allowing them to adapt the pace of learning to other professional and personal activities. In addition, this program is a direct course, so the students do not have to submit a final paper to obtain their university degree.

This **Postgraduate Diploma in Rhino Modeling** contains the most complete and up-to-date scientific program on the market. The most important features include:

- ◆ The development of case studies presented by experts in 3D Hard Surface 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
- ◆ Content that is accessible from any fixed or portable device with an Internet connection



*Get your Postgraduate Diploma in Rhino Modeling through this fully online and direct educational program"*

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*Get advanced modelling techniques in Rhinoceros and get to develop a three-dimensional model from its origin to the final rendering”*

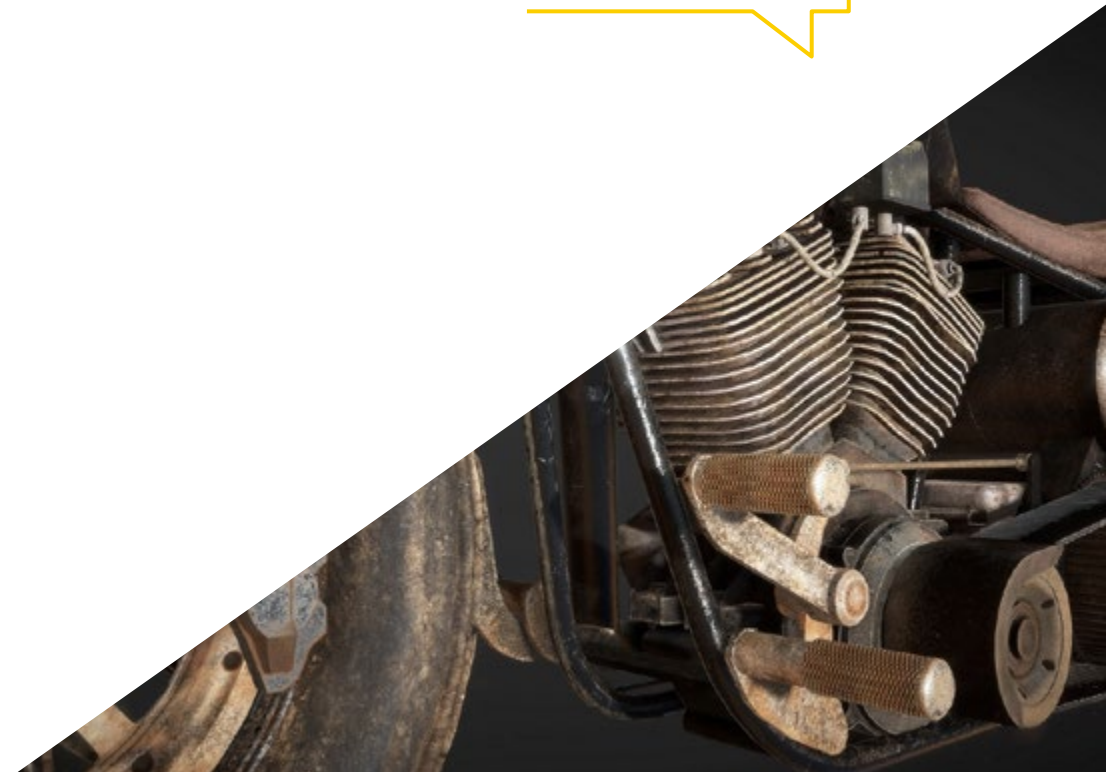
*With a fully online program and the support of a teaching team made up of real industry professionals.*

*Learn to create, edit, analyze, document and render any model with Rhino.*

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.

The design of this program focuses on problem-based learning, through which the professional must try to solve the different professional practice situations that arise throughout the academic program. For this purpose, the student will be assisted by an innovative interactive video system created by renowned and experienced experts.





# 02 Objectives

This Postgraduate Diploma focuses on students learning in detail the basics of 3D modeling in its various forms, as well as to generate designs for different industries and their application, to know all the tools that concern the profession of 3D modeler and acquire skills for the development of textures and functions of 3D models. To this end, the syllabus has been designed to integrate all the essential aspects of Rhinoceros and to achieve this set of objectives applied to Rhino modeling.







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*Thanks to this program, you will acquire the necessary skills to model with Rhinoceros from the creation to the rendering of the model"*



## General Objectives

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- ◆ 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
- ◆ Know all the tools involved in the 3D modeling profession
- ◆ Acquire skills for the development of textures and FX of 3D models

“

*Learn to model in an advanced way  
in Rhino with this Postgraduate  
Diploma in online format”*





## Specific Objectives

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### Module 1. Technical Modeling in Rhino

- ◆ Broadly understand how Nurbs modeling software works
- ◆ Work with precision modeling systems
- ◆ Learn in detail how to execute commands
- ◆ Create the basis of geometries
- ◆ Edit and transform geometries
- ◆ Work with an organization in the scenes

### Module 2. Modeling Techniques and their Application in Rhino

- ◆ Develop techniques for solving specific cases
- ◆ Apply solutions to different types of requirements
- ◆ Know the main software tools
- ◆ Incorporate mechanical knowledge into the modeling process
- ◆ Work with analysis tools
- ◆ Develop strategies to approach a model

### Module 3. Advanced Modeling in Rhino

- ◆ Learn in depth about the application of techniques to advanced models
- ◆ Understand in detail how the component parts of an advanced model work.
- ◆ Work with different parts of a complex model
- ◆ Acquire skills to sort a complex model
- ◆ Identify how the details fit

03

# Course Management

Professionals and experts in the design and three-dimensional modeling sector have devised this study plan in order to transfer to students their knowledge, derived from conceptualization and theory, but also from a long professional career. This Postgraduate Diploma has a content adapted to the demands of a growing labor market. Their extensive experience within the modeling world enables them to help students position themselves as top designers in this highly competitive industry.







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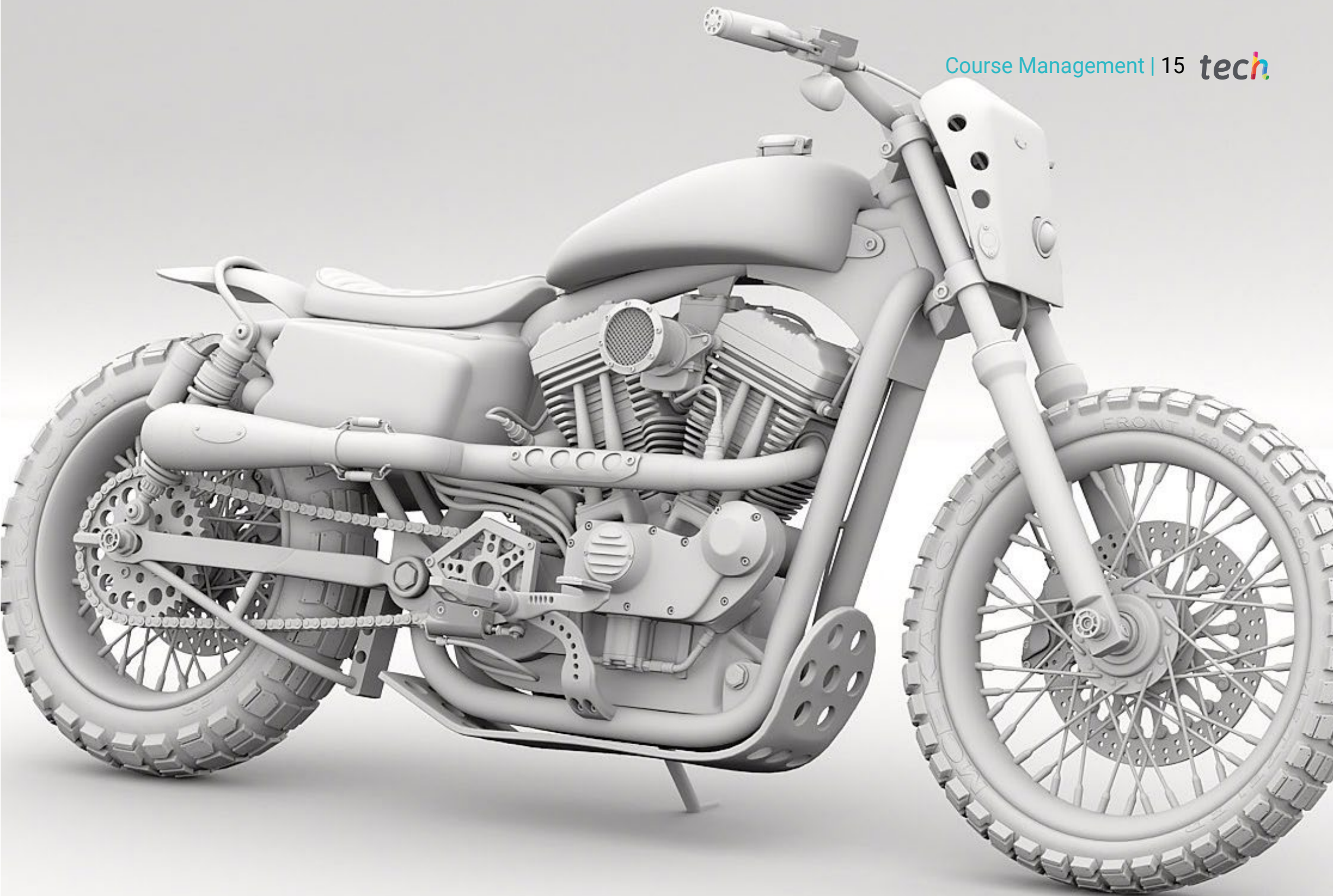
*It has the assistance of a teaching staff made up of experts and specialists in the modeling field”*

## Management



### Mr. Salvo Bustos, Gabriel Agustín

- ◆ 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
- ◆ Exhibitor at the Regional Visual Arts Salon Vendimia
- ◆ Digital Composition Seminar. National University of Cuyo
- ◆ National Congress of design and production. C.P.R.O.D.I





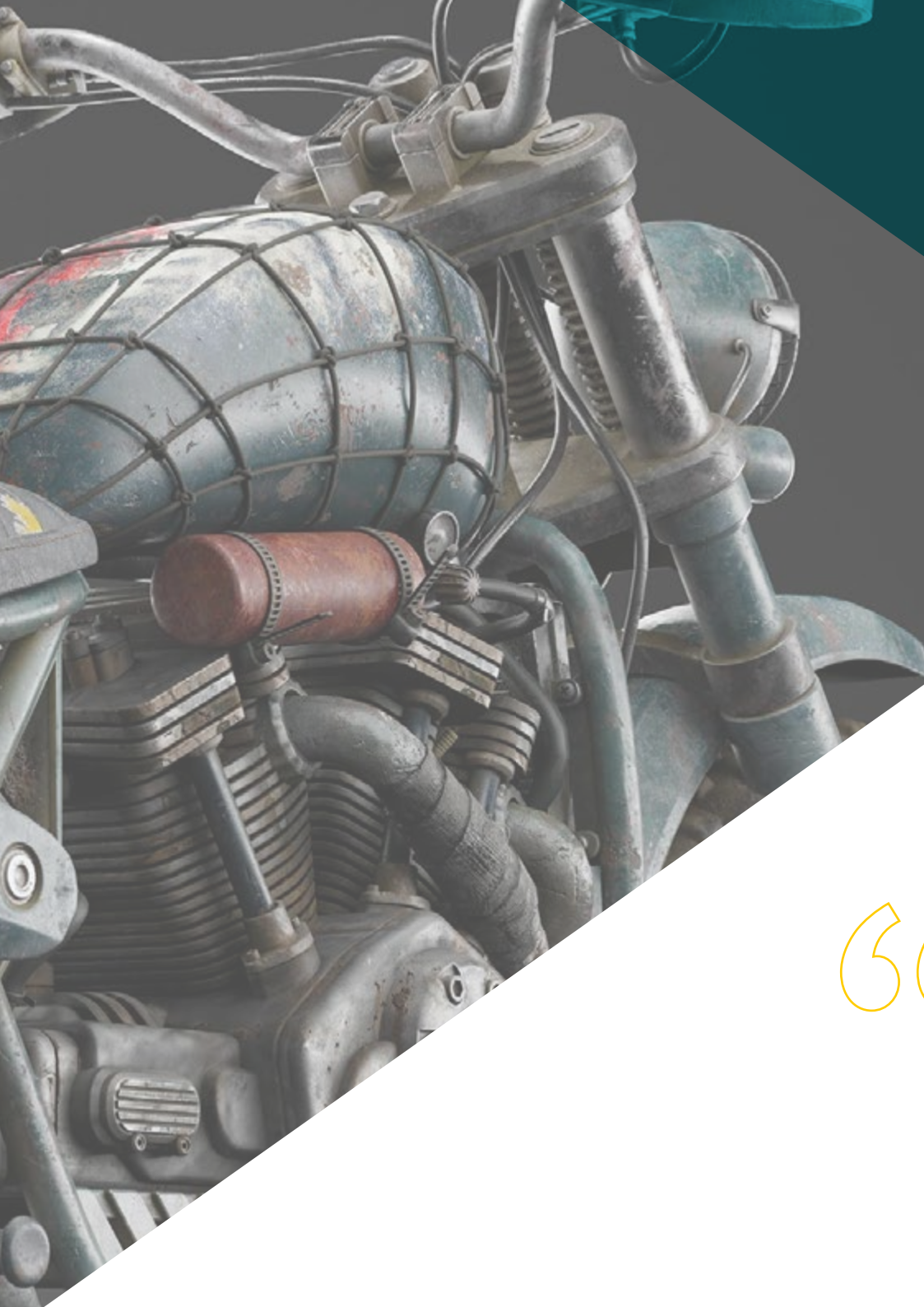
# 04

## Structure and Content

This program is structured in such a way that the students can explore the content at their own pace and speed. The knowledge necessary for modeling in Rhinoceros will be progressively consolidated. The syllabus of this Postgraduate Diploma covers all the fields that the student requires to make a model in Rhino, from the beginning to the end. In this way, the student will approach the content from a theoretical and practical perspective, but will also develop a critical professional attitude.







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*This Postgraduate Diploma covers all the fields you need to perform modeling in Rhino”*

## Module 1. Technical Modeling in Rhino

- 1.1. Rhino Modeling
  - 1.1.1. Rhino Interface
  - 1.1.2. Types of Objects
  - 1.1.3. Navigating the Model
- 1.2. Fundamental Notions
  - 1.2.1. Editing with Gumball
  - 1.2.2. Viewports
  - 1.2.3. Modeling Support
- 1.3. Precision Modeling
  - 1.3.1. Input by Coordinates
  - 1.3.2. Distance and Angle Restriction Input
  - 1.3.3. Object Restriction
- 1.4. Command Analysis
  - 1.4.1. Additional Modeling Support
  - 1.4.2. SmartTrack
  - 1.4.3. Construction Planes
- 1.5. Lines and Polylines
  - 1.5.1. Circles
  - 1.5.2. Free-Form Lines
  - 1.5.3. Helix and Spiral
- 1.6. Geometry Editing
  - 1.6.1. Fillet and chamfer
  - 1.6.2. Mixture of Curves
  - 1.6.3. Loft

- 1.7. Transformations I
  - 1.7.1. Move, Rotate, Scale
  - 1.7.2. Join, Prune, Extend
  - 1.7.3. Separate, Offset, Formations
- 1.8. Creating Shapes
  - 1.8.1. Deformable Shapes
  - 1.8.2. Modeling With Solids
  - 1.8.3. Transformation of Solids
- 1.9. Creating Surfaces
  - 1.9.1. Simple Surfaces
  - 1.9.2. Extrusion, Lofting and Surface Finishing
  - 1.9.3. Surface Sweeping
- 1.10. Organization
  - 1.10.1. Layers
  - 1.10.2. Groups
  - 1.10.3. Blocks

## Module 2. Modeling Techniques and their Application in Rhino

- 2.1. Techniques
  - 2.1.1. Support Intersection
  - 2.1.2. Creation of a Space Helmet
  - 2.1.3. Pipelines
- 2.2. Application I
  - 2.2.1. Creating a Car Tire
  - 2.2.2. Creating a Tire
  - 2.2.3. Modeling a Watch

- 2.3. Basic Techniques II
  - 2.3.1. Use of Isocurves and Edges for Modeling
  - 2.3.2. Making Apertures in the Geometry
  - 2.3.3. Working with Hinges
- 2.4. Application II
  - 2.4.1. Creation of a Turbine
  - 2.4.2. Creation of Air Inlets
  - 2.4.3. Tips for Imitating Edge Thickness
- 2.5. Data Science
  - 2.5.1. Tips for Using Mirror Symmetry
  - 2.5.2. Use of Fillets
  - 2.5.3. Use of Trims
- 2.6. Mechanical Applications
  - 2.6.1. Creating Gears
  - 2.6.2. Pulley Construction
  - 2.6.3. Construction of a Shock Absorber
- 2.7. File Import and Export
  - 2.7.1. Send Rhino Files
  - 2.7.2. Export Rhino Files
  - 2.7.3. Import to Rhino from Illustrator
- 2.8. Analysis Tools I
  - 2.8.1. Graphical Curvature Analysis Tool
  - 2.8.2. Curve Continuity Analysis
  - 2.8.3. Curve Analysis Problems and Solutions

- 2.9. Analysis Tools II
  - 2.9.1. Surface Directional Analysis Tool
  - 2.9.2. Environment Surface Mapping Analysis Tool
  - 2.9.3. Edge Display Analysis Tool
- 2.10. Strategies
  - 2.10.1. Construction Strategies
  - 2.10.2. Surface per Curve Grid
  - 2.10.3. Working with Blueprints

### Module 3. Advanced Modeling in Rhino

- 3.1. Motorcycle Modeling
  - 3.1.1. Importing Reference Images
  - 3.1.2. Modeling of Rear Tire
  - 3.1.3. Modeling of Rear Rim
- 3.2. Mechanical Components of Rear Axle
  - 3.2.1. Creating the Braking System
  - 3.2.2. Building the Transmission Chain
  - 3.2.3. Modeling the Chain Cover
- 3.3. Engine Modeling
  - 3.3.1. Creation of the Body
  - 3.3.2. Adding Mechanical Elements
  - 3.3.3. Incorporating Technical Details
- 3.4. Modeling the Main Deck
  - 3.4.1. Modeling Curves and Surfaces
  - 3.4.2. Modeling the Deck
  - 3.4.3. Cutting the Frame

- 3.5. Modeling the Upper Area
  - 3.5.1. Building the Seat
  - 3.5.2. Creating Front End Details
  - 3.5.3. Creating Back End Details
- 3.6. Functional Parts
  - 3.6.1. Gasoline Tank
  - 3.6.2. Rear Lights
  - 3.6.3. Front Lights
- 3.7. Building the Front Axle I
  - 3.7.1. Brake System and Wheel Rim
  - 3.7.2. Fork
  - 3.7.3. Handlebar
- 3.8. Building the Front Axle II
  - 3.8.1. Grips
  - 3.8.2. Brake Cables
  - 3.8.3. Instruments
- 3.9. Adding Details
  - 3.9.1. Refining the Main Body
  - 3.9.2. Adding the Muffler
  - 3.9.3. Adding the Pedals
- 3.10. Final Components
  - 3.10.1. Modeling the Windshield
  - 3.10.2. Modeling the Support
  - 3.10.3. Final Details







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*Have you Made Up Your Mind? Enroll now in this educational program and become a true expert in modeling with Rhinoceros”*

# 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.

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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 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.



06

# Certificate

The Postgraduate Diploma in Rhino Modeling guarantees students, in addition to the most rigorous and up-to-date education, access to a Postgraduate Diploma issued by TECH Global 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 Diploma in Rhino Modeling** 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.

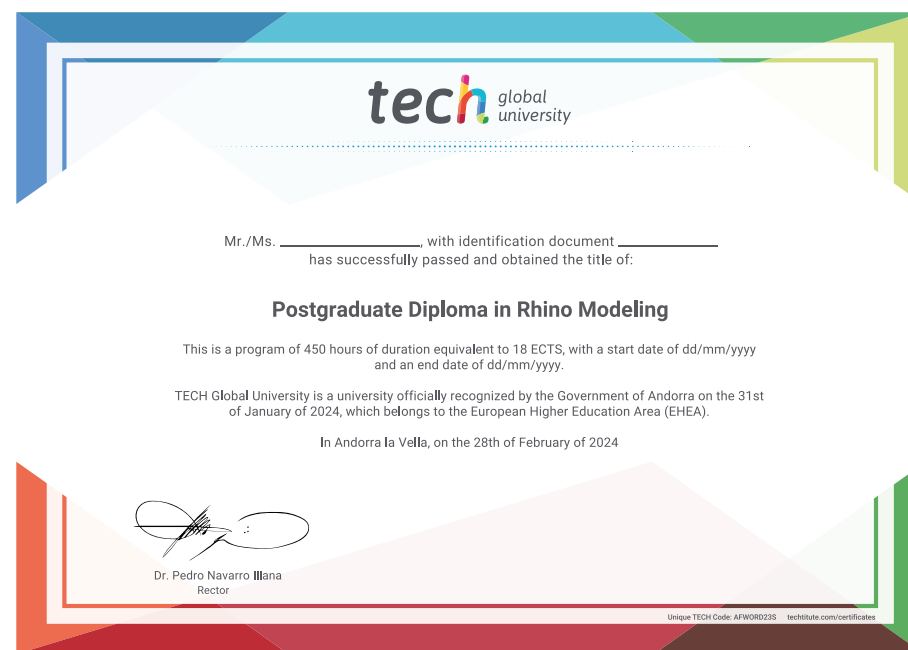
This **TECH Global University** title is a European program of continuing education and professional updating that guarantees the acquisition of competencies in its area of knowledge, providing a high curricular value to the student who completes the program.

Title: **Postgraduate Diploma in Rhino Modeling**

Modality: **online**

Duration: **6 months**

Accreditation: **18 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



## Postgraduate Diploma Rhino Modeling

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