



## Postgraduate Diploma Rhino Modeling

» Modality: online

» Duration: 6 months

» Certificate: TECH Technological University

» Schedule: at your own pace

» Exams: online

We b site: www.techtitute.com/us/design/postgraduate-diploma/postgraduate-diploma-rhino-modeling

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Certificate

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### tech 06 | Introduction

This Postgraduate Diploma is designed to enable the student to create, edit, analyze, document, render and translate any surface using the industry's leading software: Rhino. A series of practical exercises will familiarize the students with the Rhino interface and provide them with a better understanding of the fundamentals of technical modeling. Students will also learn how to execute different commands and edit geometric transformations.

Then, they will be able to develop their technique to solve specific cases in modeling, incorporating important aspects of mechanics to develop more realistic models. Finally, the student will be fully capable of approaching advanced modeling, where different objects will be made, such as a tire, brakes, engine, mechanical bodies, among others.

All this will be condensed in a 100% online program, making it easy for the students to do it comfortably, wherever and whenever they want. In addition, they adapt their learning pace to their professional activities. It is worth mentioning that this Postgraduate Diploma has a direct diploma, so the students do not have to submit a final paper to obtain their university title.

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

- The development of case studies presented by experts in 3D modeling on Hard surface
- 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



Make different mechanical bodies, perfect each part and render your final work, thanks to this program of TECH Technological University"



This program is a pioneer in the academic panorama thanks to the Relearning methodology, allowing you to learn at your own pace and with the educational material appropriate to the world of design"

The program's teaching staff includes professionals from sector who contribute their work experience to this 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.

This program will allow you to become the Rhino specialist that many companies are looking for. Do not hesitate and enroll now.

You will have a 100% online program to study where and when you prefer.







### tech 10 | Objectives



### **General Objectives**

- Learn in depth the different types of Hard surface modeling, the different concepts and characteristics to apply them in the 3D modeling industry
- Delve into the theory of shape creation 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



Model clocks, engines, turbines and a host of machinery using a system of lines and points as reference"







### **Specific Objectives**

#### Module 1. Technical Modeling in Rhino

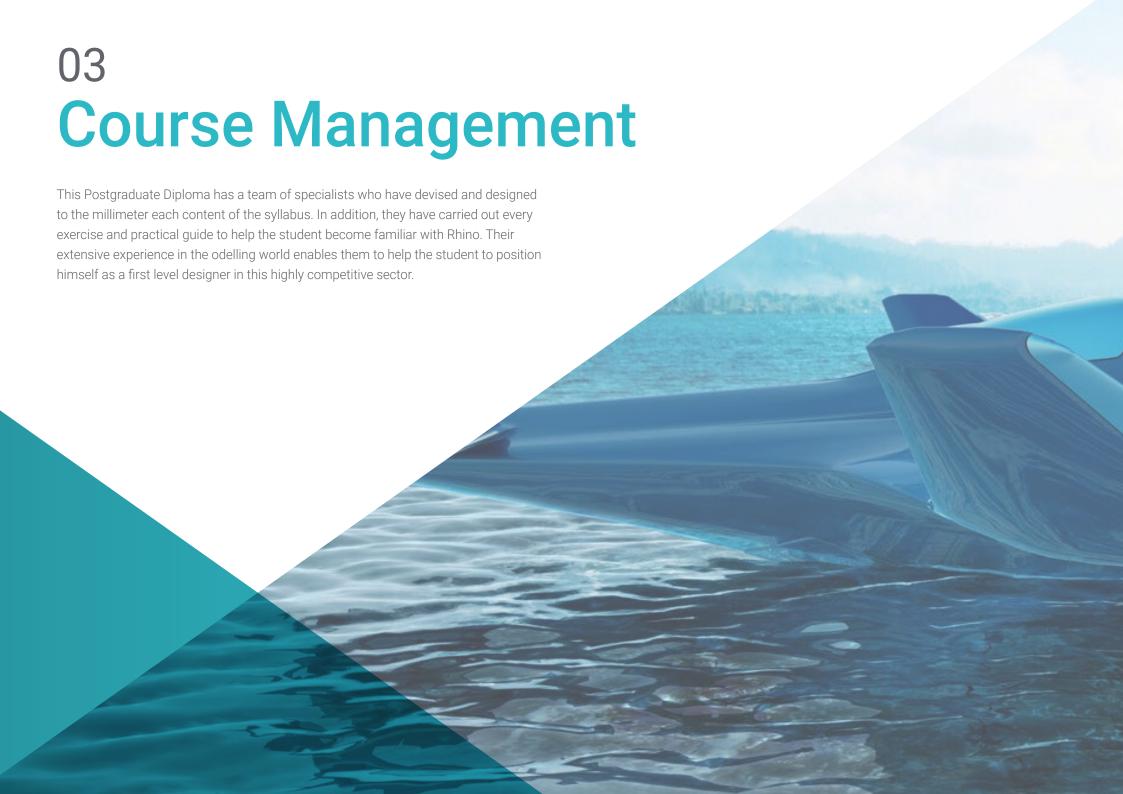
- Broadly understand how NURBS odelling software works
- Work with precision modeling systems
- Learn in detail how to execute commands
- Create the basis of geometries
- Edit and transform geometries
- Work with an organization in the scenes

#### 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 odelling process
- Work with analysis tools
- Develop strategies to approach a model

#### Module 3. Advanced Modeling in Rhino

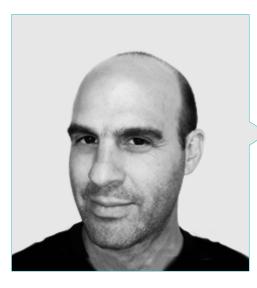
- Learn in depth about the application of techniques to advanced models
- Understand in detail how the component parts of an advanced model
- Work with different parts of a complex model
- Acquire skills to sort a complex model
- Identify how details are adjusted





### tech 14 | Course Management

#### Management



### Mr. Salvo Bustos, Gabriel Agustín

- 9 years of experience in Aeronautical 3D odelling
- 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
- Honorable Mention in Mendoza Late Contest
- 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.



04

**Structure and Content** 





### tech 18 | Structure and Content

#### 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. Organisation
  - 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. Tools
  - 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



Enroll now in this program and you will be able to improve your odelling technique with the pioneer program in the industry: Rhino"



### tech 22 | Methodology

#### 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.



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 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.

### tech 24 | Methodology

#### Relearning Methodology

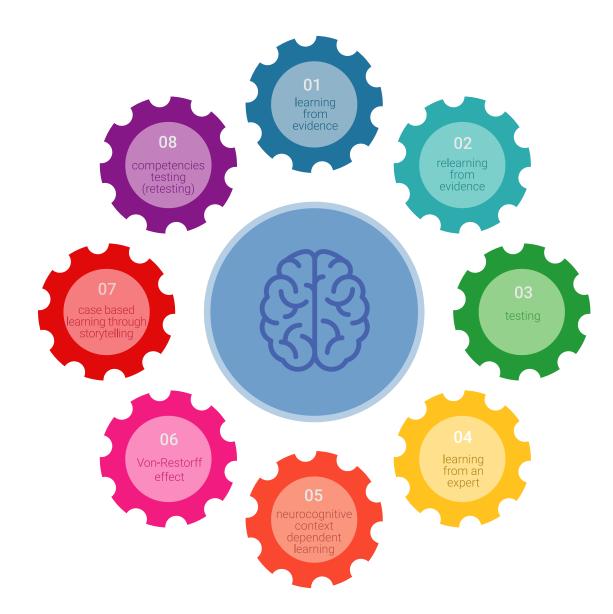
TECH effectively combines the Case Study methodology with a 100% online learning system based on repetition, which combines 8 different teaching elements in each lesson.

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.



### Methodology | 25 tech

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.



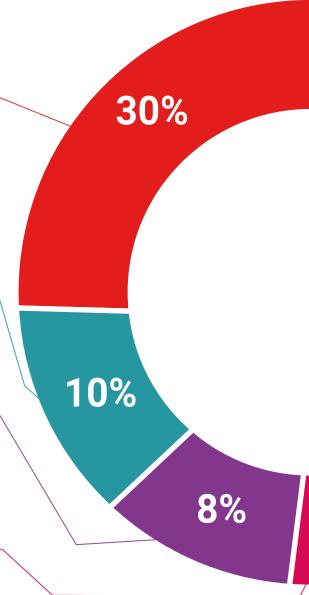
#### **Practising Skills and Abilities**

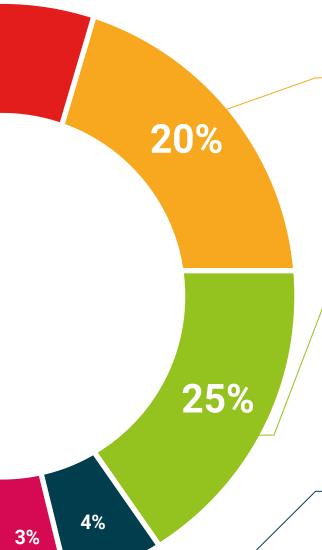
They will carry out activities to develop specific competencies and skills in each thematic area. Exercises and activities to acquire and develop the skills and abilities that a specialist needs to develop in the context of the globalization that we are experiencing.



#### **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.







### tech 30 | Certificate

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

After the student has passed the assessments, they will receive their corresponding **Postgraduate Diploma** issued by **TECH Technological University** via tracked delivery\*.

The diploma issued by **TECH Technological University** will reflect the qualification obtained in the Postgraduate Diploma, and meets the requirements commonly demanded by labor exchanges, competitive examinations, and professional career evaluation committees.

Title: Postgraduate Diploma in Rhino Modeling

Modality: online

Duration: 6 months



<sup>\*</sup>Apostille Convention. In the event that the student wishes to have their paper diploma issued with an apostille, TECH EDUCATION will make the necessary arrangements to obtain it, at an additional cost.

health confidence people
leducation information tutors
guarantee accreditation teaching
institutions technology learning
community commitment



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