Postgraduate Diploma
Hard Surface Texture Creation

tech technological university

Postgraduate Diploma
Hard Surface
Texture Creation

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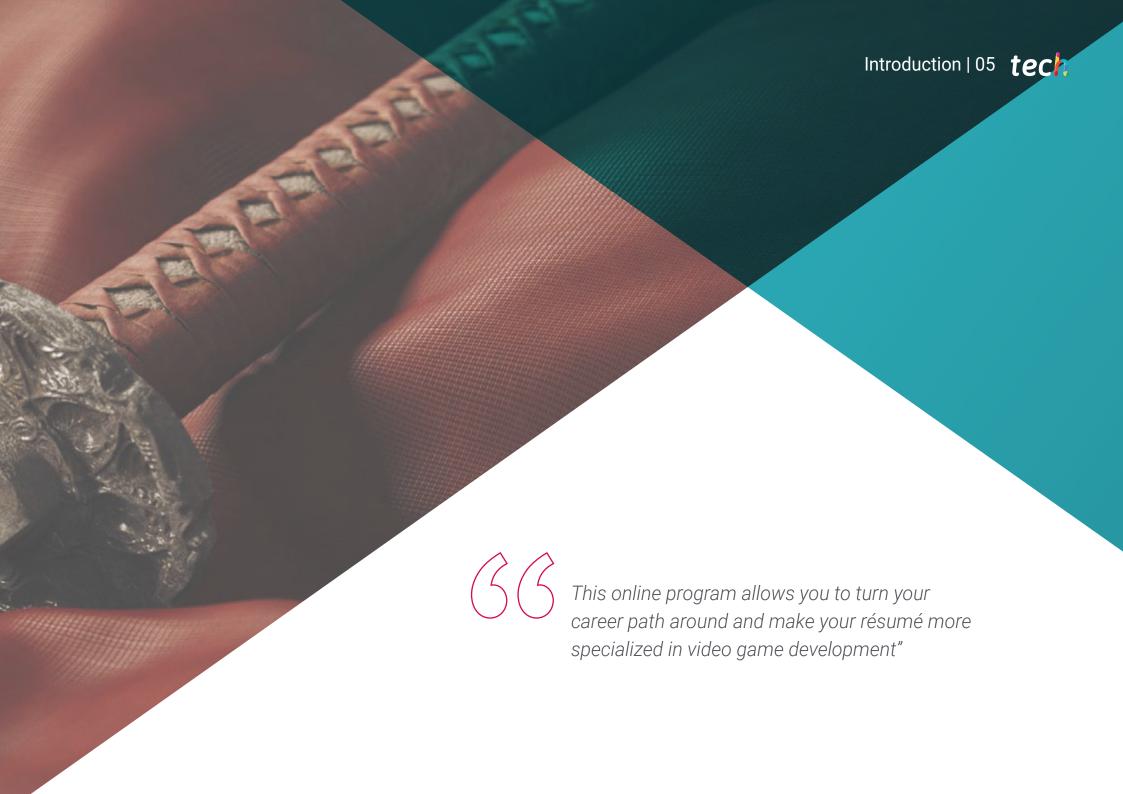- » Schedule: **at your own pace**
- » Exams: **online**

Website: **www.techtitute.com/in/videogames/postgraduate-diploma/postgraduate-diploma-hard-surface-texture-creation**

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Introduction

The video game industry, which has undergone a constant reinvention in recent decades, requires professional developers who know how to develop the best skills and abilities in their creativity. By the same token, the industry public has become increasingly demanding in terms of the finishes of the games they consume. Therefore, this program brings together the necessary notions for students who wish to become true experts in the creation of textures for Hard Surface modeling. In a period of 6 months, this online program gives the opportunity to turn your professional career around and increase your Curriculum Vitae with new notions and more specialized knowledge.

This online program allows you to turn your career path around and make your résumé more specialized in video game development"

The execution of realistic surfaces depends to a large extent on the correct application of textures. To this end, this Postgraduate Diploma has been designed so that professionals in the field of graphic development of video games can create and apply textures for Hard Surface modeling. In online mode, there will be no limit to access to all the multimedia resources in which this program is distributed. It also helps students to progress at their own pace without having to abandon their day-to-day work.

In the first phase, a study of the figure and form is made. Since the program focuses on a deeper phase of Hard Surface modeling, such as the creation of textures, the student is introduced in a first module to all aspects related to the understanding of geometry and its practical applications in subsequent design.

A second module places the student within the conceptualization and understanding of Hard Surface modeling, so the plan explores topology and retopology; the different types of Hard Surface modeling such as Sculpt, polygonal or NURB, and also UV Maps.

Finally, going deep into the subject, the program goes into the Creation of Textures for Hard Surface, so that all texturing techniques for Hard Surface are applied, working on real cases in the application of details with textures and learning how to export materials and maps for different platforms, among other issues.

This **Postgraduate Diploma in Hard Surface Texture Creation** contains the most complete and up-to-date educational program on the market. Its most notable features are:

- The development of practical cases presented by experts in the creation of textures for 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
- Access to content from any fixed or portable device with an Internet connection

Boost your resumé and specialize your career path with this online program designed to professionalize your internship in video game graphics development"

With TECH's programs you will always work on the theoretical and practical dimension of knowledge so that you become a true professional in the sector"

Professionals in the field of graphic development of video games will be able to create and apply textures for Hard Surface modeling thanks to this Postgraduate Diploma.

In perfectly structured modules, at the end of this plan, you will be able to create textures for Hard Surface modeling without any setback.

The program's teaching staff includes professionals from the 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 throughout the program. This will be done with the help of an innovative system of interactive videos made by renowned experts.

Objectives

The faculty of this Postgraduate Diploma has established clear and concise objectives for this educational plan, so that the notions and knowledge can be easily acquired. The content is designed so that the students can develop their professional career as an expert in the creation of textures in Hard Surface modeling in the video game industry. The syllabus is constantly up to date so that it can be applied in the real professional dimension.

" *Learn to create textures in Hard Surface modeling without difficulties with this program designed to guarantee learning"*

General Objectives

- In-depth knowledge of 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 form creation to develop form masters
- Be a technical expert and/or artist in 3D modeling for Hard Surface

"Become a true technical expert in three-dimensional modeling in Hard Surface"

Specific Objectives

Module 1. Study of Figure and Form

- Create and apply geometrical figure constructs
- Understand the basics of three-dimensional geometry
- Learn in detail how it is represented in technical drawing
- Identify different mechanical components
- Apply transformations by means of symmetries
- Improve your understanding of how shapes are developed
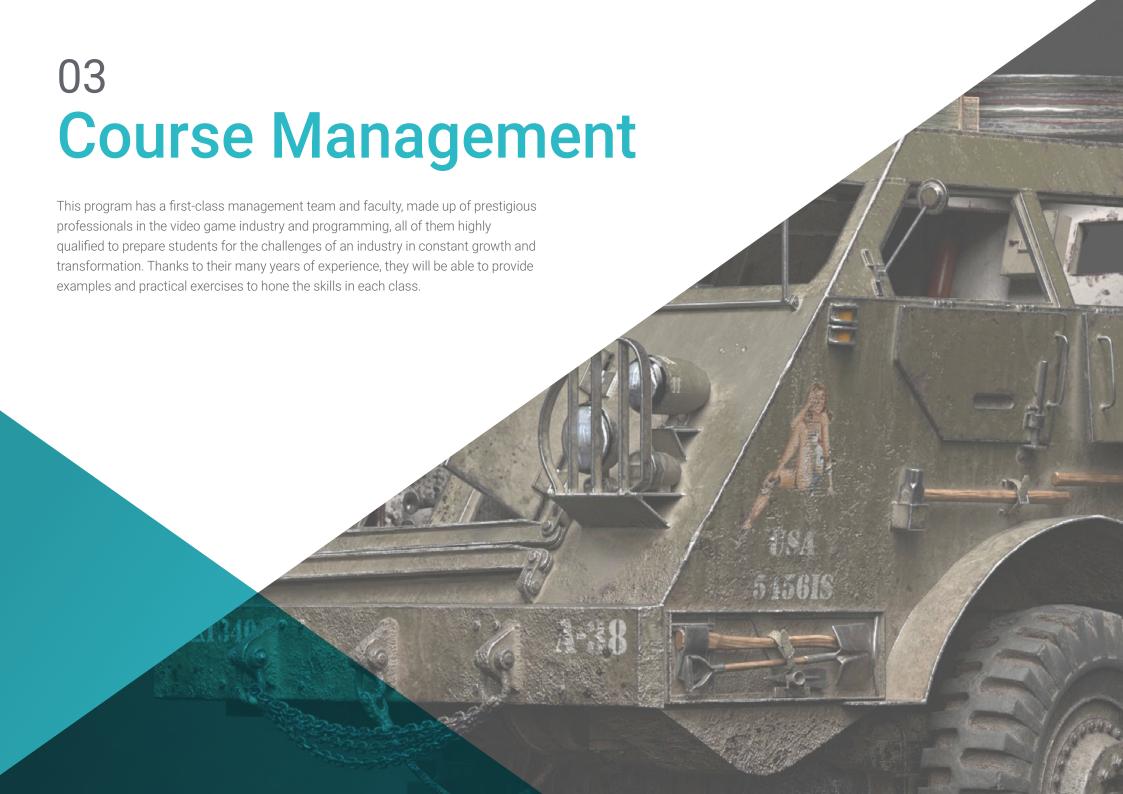- Work using the analysis of form

Module 2. Hard Surface Modeling

- In-depth understanding of how to control a topology
- Develop communication of functions
- Have knowledge on the emergence of Hard Surface
- Detailed knowledge of the different industries where it is applied
- Gain a broad understanding of the different types of modeling
- Have valid information on the areas that make up modeling

Module 3. Hard Surface Texture Creation

- Apply all texturing techniques for Hard Surface models
- Work on real cases in the application of details with textures
- Identify variations in PBR materials
- Have a broad knowledge of the differences in metallic materials
- Solve technical details using maps
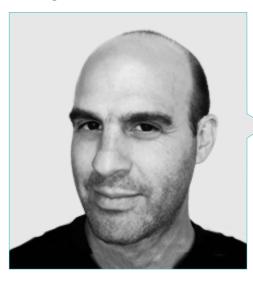- Learn how to export materials and maps for different platforms

03
Course Management

This program has a first-class management team and faculty, made up of prestigious professionals in the video game industry and programming, all of them highly qualified to prepare students for the challenges of an industry in constant growth and transformation. Thanks to their many years of experience, they will be able to provide examples and practical exercises to hone the skills in each class.

All faculty are highly qualified to prepare students for the challenges of a sector in constant growth and transformation"

Management

Mr. Salvo Bustos, Gabriel Agustín

- 9 years of experience in Aeronautical 3D modeling
- 3D Artist at 3D Visualization Service Inc
- 3D production for Boston Whaler
- 3D Modeler for Shay Bonder Multimedia TV Production Company
- Audiovisual Producer in Digital Film
- Product Designer for Escencia de los Artesanos by Eliana M
- Industrial Designer Specializing in Products National University of Cuyo
- Mendoza Late Contest Honorable Mention
- Exhibitor in Regional Visual Arts Salon Vendimia
- Digital Composition Seminar National University of Cuyo
- National Congress of Design and Production CPRODI

Structure and Content

This Postgraduate Diploma is a complete program strategically designed to acquire the necessary notions for the creation of textures in Hard Surface modeling in only 6 months. With a content structured in three modules, we will first delve into the basic issues of geometric understanding, or what is the same in the figure and form. The plan then focuses on the actual understanding of Hard Surface modeling with the different types that exist. In a third and last module, we enter into the specific subject of creating textures for Hard Surface modeling and applying them to specific models. All this, with the support of prestigious professionals in the sector who will guide you as teachers in your journey through this program.

"With a content structured in three modules, you will become a true expert in the creation of textures for Hard Surface modeling"

Module 1. Study of Figure and Form

1.1.   Geometrical Figures
   1.1.1.   Types of Geometrical Figures
   1.1.2.   Basic Geometrical Constructions
   1.1.3.   Geometric Transformations on the Plane
1.2.   Polygons
   1.2.1.   Triangles
   1.2.2.   Quadrilaterals
   1.2.3.   Regular Polygons
1.3.   Axonometric System
   1.3.1.   System Fundamentals
   1.3.2.   Types of Orthogonal Axonometry
   1.3.3.   Sketches
1.4.   Three-Dimensional Drawing
   1.4.1.   Perspective and Third Dimension
   1.4.2.   Essential Elements in Drawing
   1.4.3.   Perspectives
1.5.   Technical Drawing
   1.5.1.   Basic Notions
   1.5.2.   Disposition of Views
   1.5.3.   Cuts
1.6.   Fundamentals of Mechanical Elements I
   1.6.1.   Axis
   1.6.2.   Joints and Bolts
   1.6.3.   Springs
1.7.   Fundamentals of Mechanical Elements II
   1.7.1.   Bearings
   1.7.2.   Gears
   1.7.3.   Flexible Mechanical Components
1.8.   Laws of Symmetry
   1.8.1.   Translation-Rotation-Reflection-Extension
   1.8.2.   Touch-Overlay-Subtract-Intersect-Join
   1.8.3.   Combined Laws
1.9.   Form Analysis
   1.9.1.   Form and Function
   1.9.2.   Mechanical Form
   1.9.3.   Types of Shapes
1.10.   Topological Analysis
   1.10.1.   Morphogenesis
   1.10.2.   Composition
   1.10.3.   Morphology and Topology

Module 2. Hard Surface Modeling

2.1.   Hard Surface Modeling
   2.1.1.   Topology Control
   2.1.2.   Function Communication
   2.1.3.   Speed and Efficiency
2.2.   Hard Surface I
   2.2.1.   Hard Surface
   2.2.2.   Development
   2.2.3.   Structure
2.3.   Hard Surface II
   2.3.1.   Applications
   2.3.2.   Physical Industry
   2.3.3.   Virtual Industry
2.4.   Types of Modeling
   2.4.1.   Technical Modeling / NURBS
   2.4.2.   Polygonal Modeling
   2.4.3.   Sculpt Modeling
2.5.   Deep Hard Surface Modeling
   2.5.1.   Profiles
   2.5.2.   Topology and Edge Flow
   2.5.3.   Mesh Resolution
2.6.   NURBS Model
   2.6.1.   Dots-Lines-Polylines-Curves
   2.6.2.   Surfaces
   2.6.3.   3D Geometry

Module 3. Hard Surface Texture Creation

Create and apply textures in Hard Surface modeling in the graphic development of video games with this online Postgraduate Diploma"

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.

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 business 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. Over the course of 4 years, you will be presented with multiple practical case studies. You will have to combine all your knowledge, and research, argue, and defend your 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.

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. 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 we live in.

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 Hard Surface Texture Creation guarantees students, in addition to the most rigorous and up-to-date education, access to a Postgraduate Diploma 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 Diploma in Hard Surface Texture Creation** contains the most complete and up-to-date program on the market.

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

The certificate 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 Hard Surface Texture Creation**

Official Nº of hours: **450 h.**

tech technological university

Awards the following

CERTIFICATE

to

Mr./Ms. _____, with identification number _____.
For having passed and accredited the following program

POSTGRADUATE DIPLOMA

in

Hard Surface Texture Creation

This is a qualification awarded by this University, equivalent to 450 hours, with a start date of dd/mm/yyyy and an end date of dd/mm/yyyy.

TECH is a Private Institution of Higher Education recognized by the Ministry of Public Education as of June 28, 2018.

June 17, 2020

Tere Guevara Navarro
Dean

This qualification must always be accompanied by the university degree issued by the competent authority to practice professionally in each country.   Unique TECH Code: AFWORD23S   techtitute.com/certificates

*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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