

Postgraduate Certificate Light Modeling





Postgraduate Certificate Light Modeling

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

Website: www.techtute.com/us/videogames/postgraduate-certificate/light-modeling

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01

Introduction

In the development of a video game, light is what can really give a greater sense of realism to what you see on screen. A scene with realistic textures will really feel as such, if it corresponds to the incidence of light, to what is known in real life and to the product with its interaction. Their abilities to transform, enhance style, color, brightness and other characteristics can change the perception of the receiver. Mastering advanced lighting techniques and multi-pass systems will give the professional a background for development, which is very attractive in today's industry. This is how this specialized 100% online program arises, which will provide students with the latest knowledge in the area, through a cutting-edge methodology: *relearning*, unique for facilitating quality learning.





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Learn about the Light Modeling techniques most commonly used in AAA companies such as Epic Games and large animation studios such as Disney”

The lighting in the video game scene and the incidence of light in 3D modeling in general, plays an important role as it allows to maximize the volumes. Determining one's own style through the knowledge of the most relevant ones will allow the professional to represent his works in different genres. Integrating your work into fast visualization systems such as Keyshot or Marmoset to launch turntable videos with mesh visualization will make you stand out in your models' showreel.

This Postgraduate Certificate in Light Modeling is intended to show in detail the multi-pass systems to divide the rendering in layers of light and object management, improving its final quality when edited professionally through Photoshop. It also gives the student the possibility to work the renderings from the paradigm of photorealism and non-photorealistic styles with cartoon and hand painted styles, even with the implementation of the incredible video game engines Unity and Unreal, making the processes much more efficient.

All this, in only 6 weeks, through an innovative study methodology 100% online and based on relearning, which facilitates the learning process of the student, who seeks to broaden his or her professional horizons. You will have a variety of multimedia resources and content displayed in various written and audiovisual formats, selected by expert teachers, available from day one for consultation and downloading, using a device of your choice. This gives the program a seal of quality and ease of use.

This **Postgraduate Certificate in Light Modeling** is the most comprehensive and up-to-date educational program on the market. The most important features include:

- ◆ The development of case studies presented by experts in 3D Modeling and Digital Sculpture
- ◆ The graphic, schematic, and eminently practical contents with which they are created, provide scientific and practical information on the disciplines that are essential for professional practice
- ◆ Practical exercises where self-assessment can be used 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



Power your talent and creativity, implementing the amazing video game engines Unity and Unreal"

“

Get the most out of your 3D objects. Make them visually appealing by applying the best lighting techniques”

The programs 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 during the academic year. For this purpose, the student will be assisted by an innovative interactive video system created by renowned and experienced experts.

Learn all the latest content on light modeling in this Postgraduate Certificate.

A program led by real experts who will guide you on the road to success.

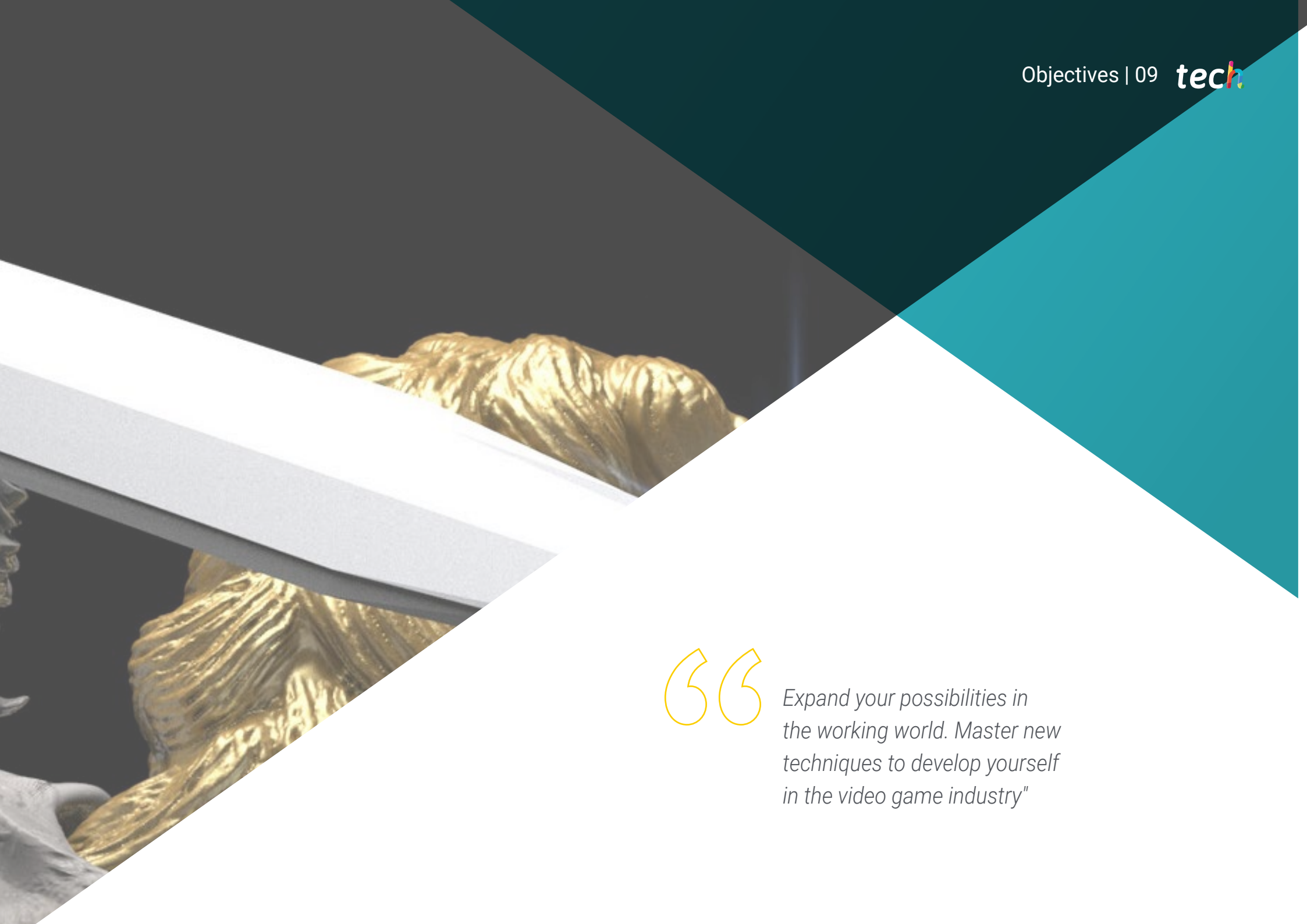


02

Objectives

Part of the objective of this Postgraduate Certificate is to provide an in-depth knowledge of everything related to Light Modeling, its techniques, processes and the best tools to create works with the best final result. For which it has an exclusive content developed by expert teachers, who will facilitate the learning experience in a 100% online environment and with the most modern study methodology, which allows today's professional to combine work and study without stumbling blocks or major sacrifices.





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Expand your possibilities in the working world. Master new techniques to develop yourself in the video game industry”



General Objectives

- ◆ Apply processes of modeling, texturing, lighting and rendering in a precise way
- ◆ Understand the need for a good topology at all levels of development and production
- ◆ Efficiently employ the advanced techniques of global illumination
- ◆ Understand current systems in the film and video game industry to deliver great results





Specific Objectives

- ◆ Develop advanced lighting and photography concepts in offline engines such as Arnold and Vray, as well as post-production of renders to have professional finishes
- ◆ Deepen in advanced visualizations in realtime in Unity and Unreal
- ◆ Modeling in videogame engines to create interactive scenographies
- ◆ Integrate projects in real spaces



Make expert use of lighting in your 3D creations. Enroll in this Postgraduate Certificate in Light Modeling"

03

Course Management

For the design of this Postgraduate Certificate in Light Modeling , TECH has selected a teaching staff composed of professionals specialized in 3D modeling, *concept art* and *video mapping*. They also share outstanding human values and manage the pedagogy required to impart knowledge through the most innovative methodology based on *relearning* and through a modern virtual campus. They will accompany the students in their learning process and will be supported by a variety of multimedia resources to make the learning process more dynamic.





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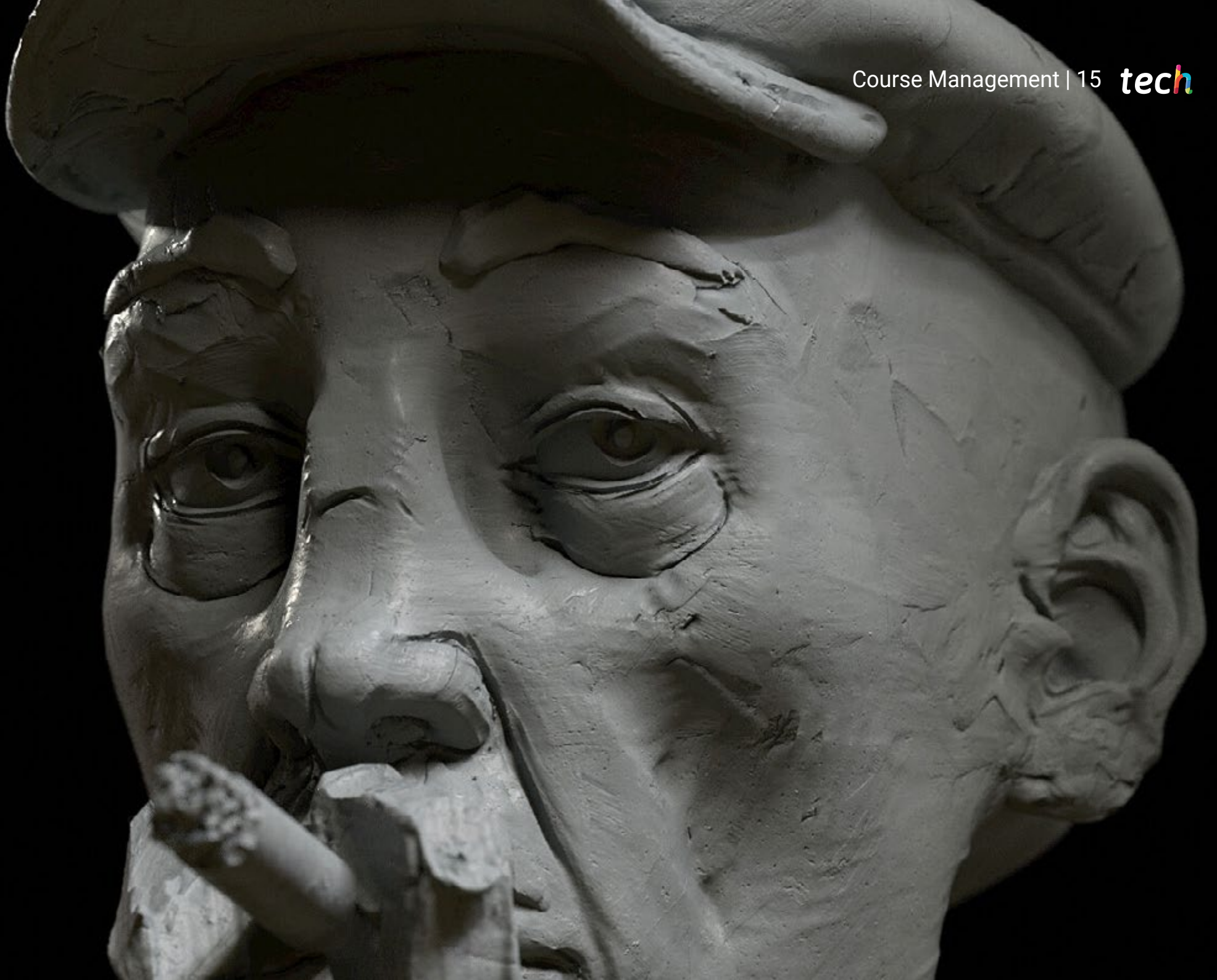
*Prepare for your professionalization now.
Master the techniques that will make your
projects stand out in the future”*

Management



Mr. Sequeros Rodríguez, Salvador

- Freelance 2D/3D modeler and generalist
- Concept art and 3D modeling for Slicecore Chicago
- Videomapping and modeling Rodrigo Tamariz Valladolid
- Professor of Higher Level Training Cycle 3D Animation Superior School of Image and Sound ESISV Valladolid
- Professor of Higher Level Training Cycle GFGS 3D Animation European Institute of Design IED Madrid
- 3D modeling for the falleros Vicente Martinez and Loren Fandos Castellón
- Bachelor of Fine Arts at the University of Salamanca (specializing in Design and Sculpture)
- Master in Computer Graphics, Games and Virtual Reality URJC University. Madrid



04

Structure and Content

To learn about the current and more specific techniques used in 3D modeling, the content of this Postgraduate Certificate in Light Modeling has been distributed in various online and theoretical formats, available from the first day for consultation or download. It has been designed by an expert team of teachers who have defined the most important and useful topics for the professional's development. This allows you to have an agile learning experience in only 6 weeks, through TECH Global University's platform that provides a safe and dynamic environment.





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With this program you will achieve amazing results in your creations”

Module 1. Light Modeling

- 1.1. Offline Arnold Motors
 - 1.1.1. Interior and Exterior Lighting
 - 1.1.2. Application of Displacement and Normal Maps
 - 1.1.3. Render Modifiers
- 1.2. Vray
 - 1.2.1. Lighting Bases
 - 1.2.2. Shading
 - 1.2.3. Maps
- 1.3. Advanced Global Illumination Techniques
 - 1.3.1. ActiveShade GPU Management
 - 1.3.2. Optimization of Photorealistic Rendering Denoiser
 - 1.3.3. Non-photorealistic Rendering (Cartoon and Hand Painted)
- 1.4. Quick Display of Models
 - 1.4.1. ZBrush
 - 1.4.2. Keyshot
 - 1.4.3. Marmoset
- 1.5. Rendering Postproduction
 - 1.5.1. Multipass
 - 1.5.2. 3D Illustration in ZBrush
 - 1.5.3. Multipass in Zbrush
- 1.6. Integration in Real Spaces
 - 1.6.1. Shadow Materials
 - 1.6.2. HDRI and Global Illumination
 - 1.6.3. Image Tracing



- 1.7. Unity
 - 1.7.1. Interface and Organization
 - 1.7.2. Import to Game Engines
 - 1.7.3. Materials
- 1.8. Unreal
 - 1.8.1. Interface and Organization
 - 1.8.2. Sculpture in Unreal
 - 1.8.3. Shaders
- 1.9. Modeling in Video Game Engines
 - 1.9.1. Probuilder
 - 1.9.2. Modeling Tools
 - 1.9.3. Prefabs and Memory Storages
- 1.10. Advanced Lighting Techniques in Videogames
 - 1.10.1. Realtime, Pre-calculation of Lights and HDRP
 - 1.10.2. Raytracing
 - 1.10.3. Postprocessing



Master in only 6 weeks the most advanced techniques in modeling with light, with this TECH Postgraduate Certificate"

05

Methodology

This training program offers 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.





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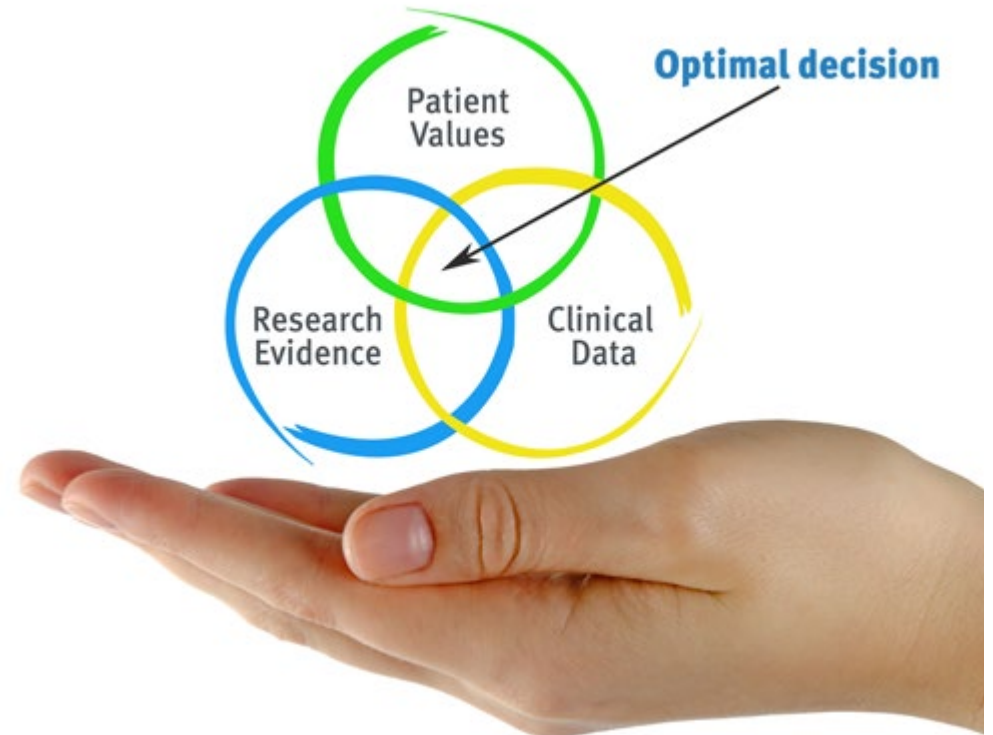
Discover Relearning, a system that abandons conventional linear learning, to take you through cyclical teaching systems: a way of learning that has proven to be extremely effective, especially in subjects that require memorization"

At TECH we use the Case Method

Our program offers a revolutionary method of skills and knowledge development. Our goal is to strengthen skills in a changing, competitive, and highly demanding environment.

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At TECH, you will experience a way of learning that is shaking the foundations of traditional universities around the world”



We are the first online university to combine Harvard Business School case studies with a 100% online learning system based on repetition.



The student will learn, through collaborative activities and real cases, how to solve complex situations in real business environments.

A learning method that is different and innovative

This intensive Video Game Design program at TECH Global University prepares you to face all the challenges in this field, both nationally and internationally. We are committed to promoting your personal and professional growth, the best way to strive for success, that is why, at TECH Global University, you will use Harvard case studies, with which we have a strategic agreement that allows us, to offer you material from the best university in the world.

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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

Our university is the first in the world to combine Harvard University case studies with a 100% online learning system based on repetition, which combines different teaching elements in each lesson.

We enhance Harvard case studies 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 university 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.



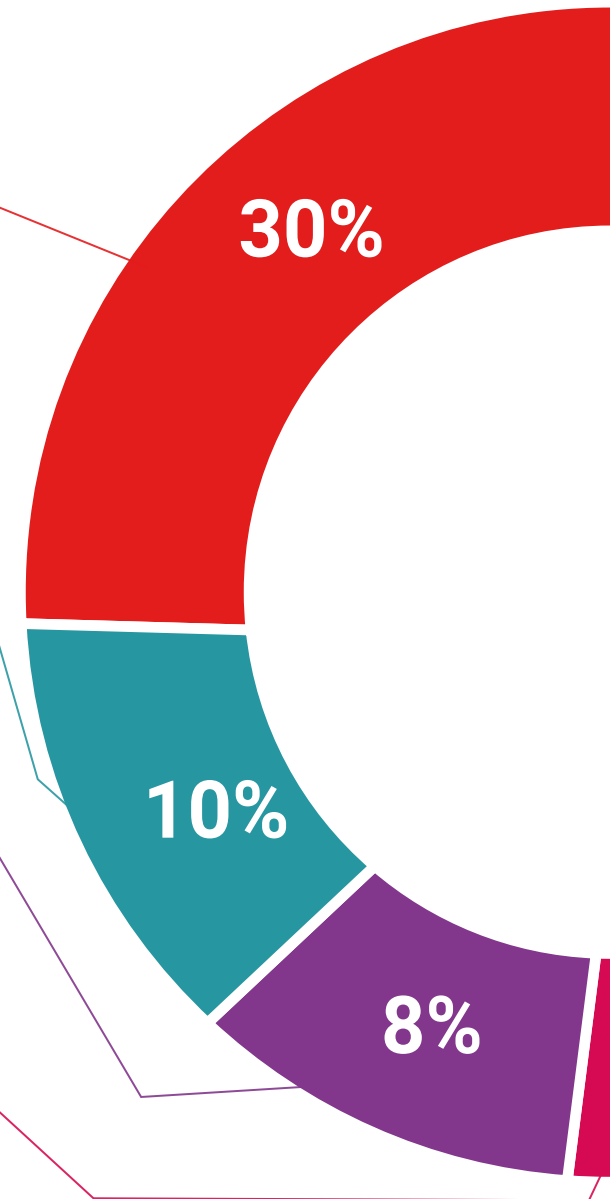
Practising Skills and Abilities

They will carry out activities to develop specific 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 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.





Case Studies

They will complete a selection of the best case studies in the field used at Harvard. Cases that are presented, analyzed, and supervised by the best senior management 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 multimedia content presentation training Exclusive system 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 your goals.



06 Certificate

The Postgraduate Certificate in Light Modeling guarantees you, in addition to the most rigorous and updated training, access to a Postgraduate Certificate issued by TECH Global University.



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Successfully complete this training and receive your university degree without travel or laborious paperwork”

This program will allow you to obtain your **Postgraduate Certificate in Light 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 Certificate in Light Modeling**

Modality: **online**

Duration: **6 weeks**

Accreditation: **6 ECTS**



*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.

future
health confidence people
education information tutors
guarantee accreditation teaching
institutions technology learning
community commitment
personalized service innovation
knowledge present quality
development language
classroom



Postgraduate Certificate Light Modeling

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

Postgraduate Certificate Light Modeling

