

# Postgraduate Certificate Rendering, Lighting and Posing of 3D Models



## Postgraduate Certificate Rendering, Lighting and Posing of 3D Models

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

Website: [www.techtute.com/us/information-technology/postgraduate-certificate/rendering-lighting-posing-3d-models](http://www.techtute.com/us/information-technology/postgraduate-certificate/rendering-lighting-posing-3d-models)

# Index

01

Introduction

---

*p. 4*

02

Objectives

---

*p. 8*

03

Course Management

---

*p. 12*

04

Structure and Content

---

*p. 16*

05

Methodology

---

*p. 20*

06

Certificate

---

*p. 28*

# 01

# Introduction

The correct lighting and posing is essential for any 3D model, as they are two of the most important elements when presenting a professional project. A computer scientist in the 3D design sector with adequate skills in this field can develop more visual and eye-catching models than other candidates. This 100% online degree includes a multitude of 3D modeling processes and techniques with which the graduate can stand out in their field and give a notorious quality boost to their own professional career in the world of computer science and organic 3D design.





“

*You are before the degree that will allow you to acquire the knowledge in rendering you are looking for, adapted to the latest trends and developments in this regard"*

Lighting, rendering and posing of 3D models is fundamental in the industry not only to improve the quality and realism of the final result, but also to know how to structure a better presentation of all professional work. Many computer scientists do not have all the important skills in this area, so they are also unable to develop a quality portfolio that will attract potential clients or high-level studios.

The Postgraduate Certificate offers a complete training and specialization in Rendering, Lighting and 3D Model Posing. At the same time, it also delves into the rendering process itself, in order to save the student's work time and thus improve their daily methodology. You will learn to use the most commonly used tools such as Zbrush, Maya o Mixamo, so that you will be able to adapt to any work environment.

The degree, moreover, is taught completely online. This means that the student can download all the didactic material from the first day of the program, being able to access it on any device with an internet connection. This is a great advantage and convenience for students seeking to combine their personal responsibilities with high-level training.

This **Postgraduate Certificate in Rendering, Lighting and Posing of 3D Models** contains the most complete and up-to-date educational program on the market. The most important features include:

- ◆ The development of case studies presented by experts in Rendering, Lighting and Posing of 3D Models
- ◆ The graphic, schematic, and eminently practical contents with which they are created, provide 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



*In the dizzying technological revolution we live in, studying for a Postgraduate Certificate is a differentiating factor that will make you more competitive"*



“

*You will get your Postgraduate Certificate in Rendering, Lighting and Posing of 3D Models directly without the need to do a final work"*

The program's 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.

*This program will address your concerns and aspirations, receiving the best support and advice in 3D modeling that you can ask for.*

*Design the 3D models of video games that you love to make with the help of the best professionals.*



# 02

# Objectives

With this Postgraduate Certificate, the students will acquire skills and competencies that will help them to refine the composition of color, light, shapes and elements that will enhance their work. In this way, this degree is a decisive boost for computer scientists to reach their full potential in the field of 3D design.







“

*This Postgraduate Certificate will help you both in your daily performance and in presenting quality designs with which you will stand out"*



## General Objectives

---

- ◆ Expand knowledge of human and animal anatomy in order to develop hyper-realistic creatures
- ◆ Master retopology, UVs and texturing to perfect the models created
- ◆ Create an optimal and dynamic workflow to work more efficiently with 3D modeling
- ◆ Have the skills and knowledge most in demand in the 3D industry to be able to apply for the best jobs





## Specific Objectives

---

- ◆ Discover advanced lighting and photography concepts to sell models more efficiently
- ◆ Develop the learning of model posing by means of different techniques
- ◆ Delve into the development of a rig in Maya for the subsequent possible animation of the model
- ◆ Observe the control and use of the rendering of the model, bringing out all its details

“

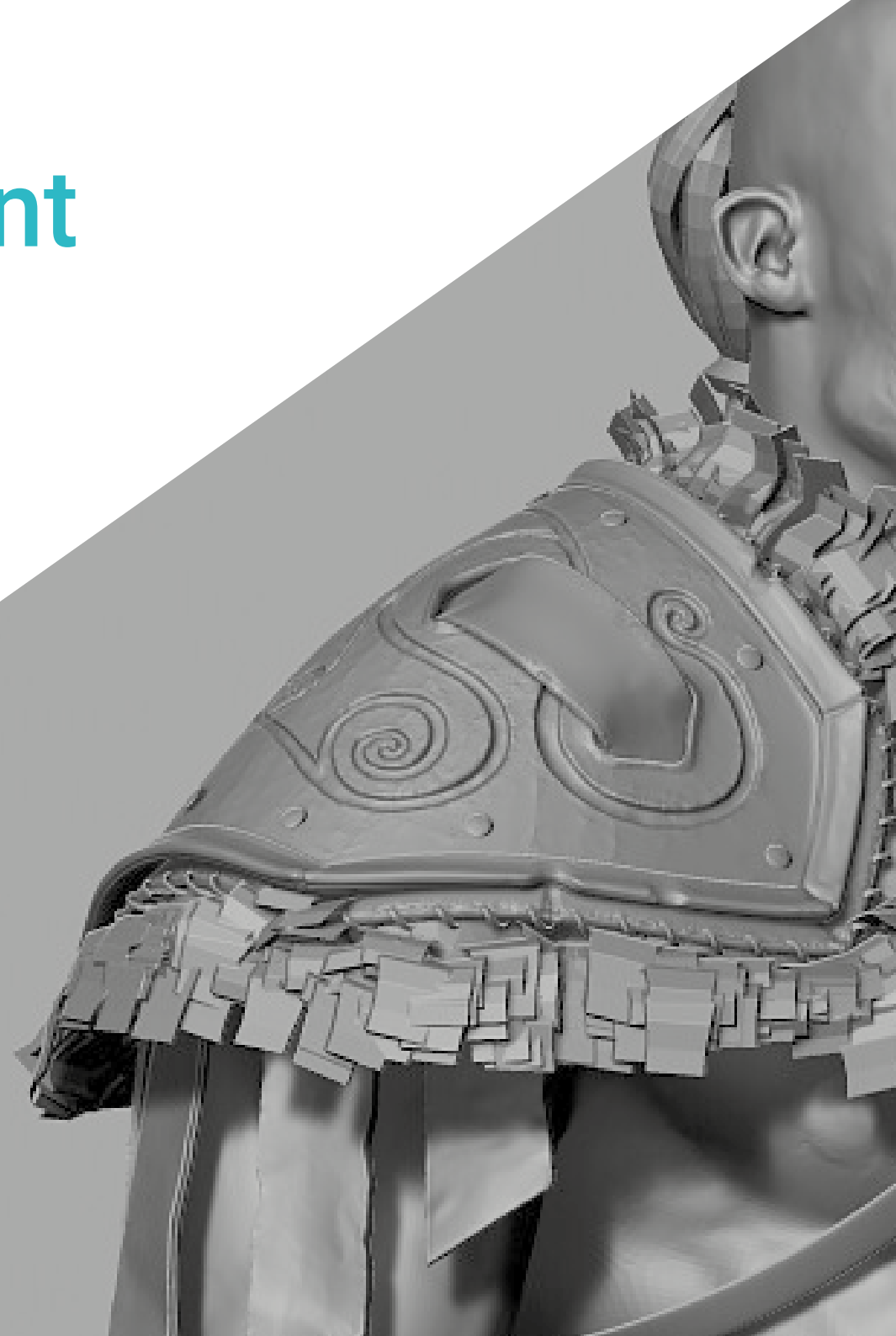
*Develop the skills you need to be successful in the field of organic 3D model posing”*



# 03

# Course Management

Experts in the use of interfaces such as Maya, Arnold, Mixamo or ZBrush come together in this course to teach students the latest techniques and uses of these constantly up-to-date applications. Thanks to cases based on the real experience of the teaching staff, the graduate will gain a contextual understanding of all theoretical content, greatly facilitating the work of study.







“

*Specialized teachers in organic 3D modeling will teach you the keys to the rendering process”*

## International Guest Director

Joshua Singh is a leading professional with over 20 years of experience in the video game industry, internationally recognized for his skills in art direction and visual development. With solid training in software such as Unreal, Unity, Maya, ZBrush, Substance Painter and Adobe Photoshop, he has made a significant mark in the field of game design. In addition, his experience spans visual development in both 2D and 3D, and is distinguished by his ability to collaboratively and thoughtfully solve problems in production environments.

In addition, as Art Director at Marvel Entertainment, he has collaborated with and guided elite teams of artists, ensuring that the artwork meets the required quality standards. He has also served as Lead Character Artist at Proletariat Inc. where he has created a safe environment for his team and has been responsible for all character assets in video games.

With an outstanding track record, including leadership roles at companies such as Wildlife Studios and Wavedash Games, Joshua Singh has been an advocate for artistic development and a mentor to many in the industry. Not to mention his time at large and well-known companies, such as Blizzard Entertainment and Riot Games, where he has worked as a Senior Character Artist. And, among his most relevant projects, stands out for his participation in hugely successful video games, including Marvel's Spider-Man 2, League of Legends and Overwatch.

Thus, his ability to unify the vision of Product, Engineering and Art has been fundamental to the success of numerous projects. Beyond his work in the industry, he has shared his experience as an instructor at the prestigious Gnomon School of VFX and has been a presenter at renowned events such as the Tribeca Games Festival and the ZBrush Summit.



## D. Singh, Joshua

---

- Art Director at Marvel Entertainment, California, USA
- Lead Character Artist at Proletariat Inc
- Art Director at Wildlife Studios
- Art Director at Wavedash Games
- Senior Character Artist at Riot Games
- Senior Character Artist at Blizzard Entertainment
- Artist at Iron Lore Entertainment
- 3D Artist at Sensory Sweep Studios
- Senior Artist at Wahoo Studios/Ninja Bee
- General Studies from Dixie State University
- Degree in Graphic Design from Eagle Gate Technical College

“

*Thanks to TECH you will be able to learn with the best professionals in the world"*

## Management



### Ms. Gómez Sanz, Carla

- 3D Generalist at Blue Pixel 3D
- Concept Artist, 3D Modeler Shading in Timeless Games Inc.
- Collaboration with multinational consulting firm for the design of vignettes and animation for commercial proposals
- Advanced Technician in 3D Animation, video games and interactive environments at CEV School of Communication, Image and Sound
- Master's Degree and Bachelor Degree in 3D Art, Animation and Visual Effects for videogames and cinema at CEV School of Communication, Image and Sound





# 04

# Structure and Content

The content and structure of this program has been designed following TECH's high-quality standards. With the best set of up-to-date knowledge, the computer scientists will be better prepared for a future career in which they will master the tools of Rendering, Lighting and 3D Model Posing.







“

*This is a very complete academic program in 3D Modeling that will introduce you to a sector of great interest for computer scientists”*

## Module 1. Rendering, Lighting and Posing of Models

- 1.1. Characters Posing in ZBrush
  - 1.1.1. Rig in ZBrush with ZSpheres
  - 1.1.2. Transpose Master
  - 1.1.3. Professional Finish
- 1.2. Rigging and Weighting of our Own Skeleton in Maya
  - 1.2.1. Rig in Maya
  - 1.2.2. Rigging Tools with Advanced Skeleton
  - 1.2.3. Rig Weighting
- 1.3. Blend Shapes to Give Life to Your Character's Face
  - 1.3.1. Facial Expressions
  - 1.3.2. Blend Shapes of Maya
  - 1.3.3. Animation with Maya
- 1.4. Mixamo, a Quick Way to Present Our Model
  - 1.4.1. Mixamo
  - 1.4.2. Mixamo Rigs
  - 1.4.3. Animations
- 1.5. Lighting Concepts
  - 1.5.1. Lighting Techniques
  - 1.5.2. Light and Color
  - 1.5.3. Shades
- 1.6. Arnold Renderer Lights and Parameters
  - 1.6.1. Lights with Arnold and Maya
  - 1.6.2. Lighting Control and Parameters
  - 1.6.3. Arnold Parameters and Configuration







- 1.7. Lighting of our Models in Maya with Arnold Renderer
  - 1.7.1. Lighting Set Up
  - 1.7.2. Model Lighting
  - 1.7.3. Mixing Light and Color
- 1.8. Going Deeper in Arnold: Denoising and the Different AOV's
  - 1.8.1. AOV's
  - 1.8.2. Advanced Noise Treatment
  - 1.8.3. Denoiser
- 1.9. Real-Time Rendering in Marmoset Toolbag
  - 1.9.1. Real-time vs Ray Tracing
  - 1.9.2. Advanced Marmoset Toolbag
  - 1.9.3. Professional Presentation
- 1.10. Post-Production Rendering in Photoshop
  - 1.10.1. Image Processing
  - 1.10.2. Photoshop: Levels and Contrasts
  - 1.10.3. Layers: Characteristics and their Effects

“

*Don't miss the opportunity to rise as a leading computer scientist in the world of 3D modeling”*

# 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.







“

*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.

“

*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.*





### A learning method that is different and innovative.

This intensive Information Technology 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.

“

*Our program prepares you to face new challenges in uncertain environments and achieve success in your career”*

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

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

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 Rendering, Lighting and Posing of 3D Models guarantees students, in addition to the most rigorous and up-to-date education, access to a Postgraduate Certificate issued by TECH Global University.



“

*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 Rendering, Lighting and Posing of 3D Models** 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 Rendering, Lighting and Posing of 3D Models**

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  
development language  
classroom



## Postgraduate Certificate Rendering, Lighting and Posing of 3D Models

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



# Postgraduate Certificate Rendering, Lighting and Posing of 3D Models

