

Postgraduate Certificate Anatomical 3D Modeling





Postgraduate Certificate Anatomical 3D Modeling

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

Website: www.techtute.com/us/information-technology/postgraduate-certificate/anatomical-3d-modeling

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

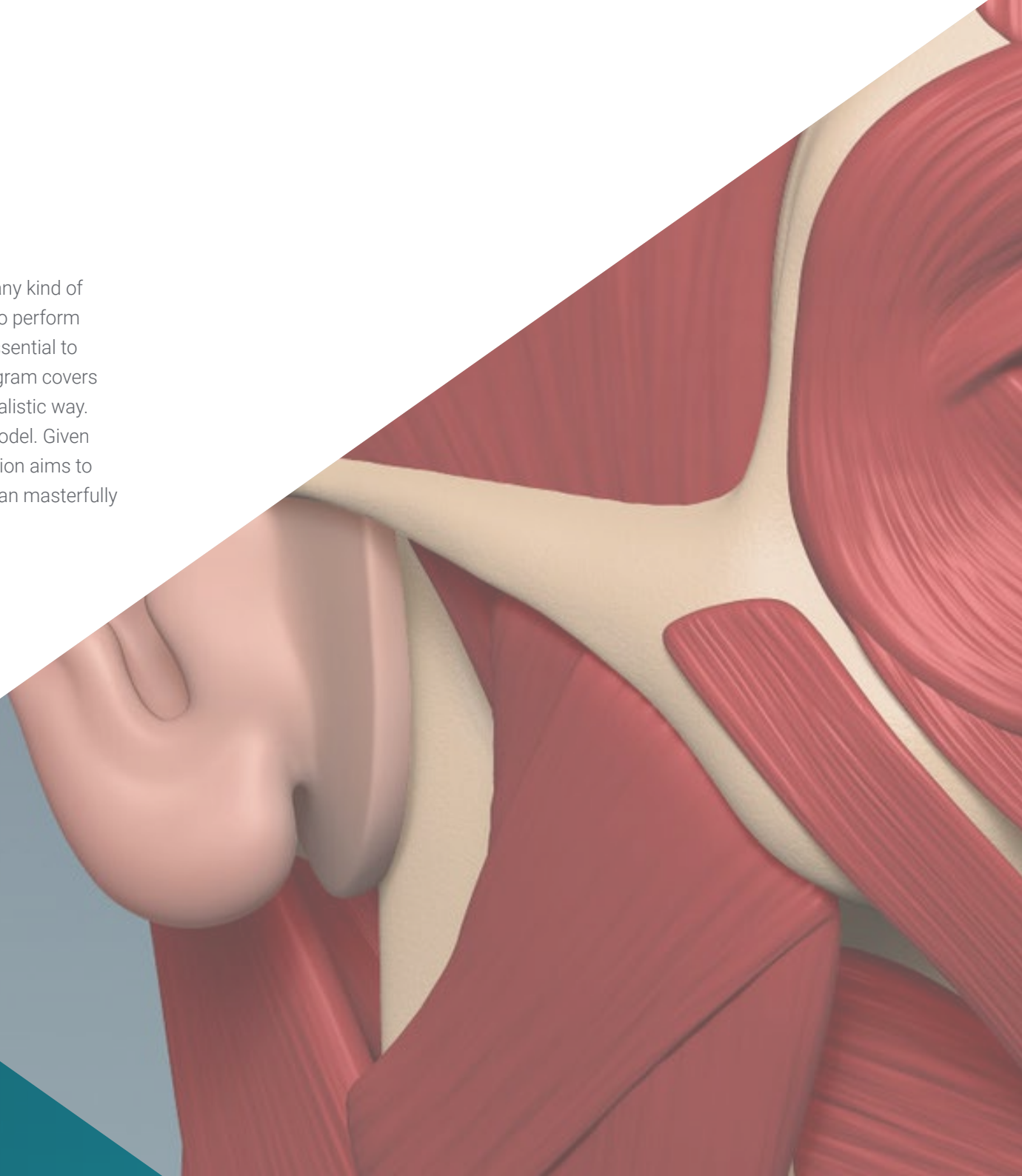
Certificate

p. 28

01

Introduction

Knowing the anatomy of the human body is essential when doing any kind of 3D modeling, especially when it comes to human figures. In order to perform your role as a computer scientist and designer to perfection, it is essential to know how to create the most refined characters possible. This program covers the design of joints, muscles, pores and even wrinkles in a hyper-realistic way. It also teaches perfectly how to build bones and tendons for any model. Given that nowadays most 3D figures are humanoid, this online qualification aims to prepare the graduate for a growing market demand in which they can masterfully adopt any type of 3D Anatomical Modeling.



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In today's fast-paced technological revolution, studying a Postgraduate Certificate is a differentiating factor that will make you more competitive”

The design of video games and animated films generate millions of dollars, and more and more professionals in the world of computer science and design are deciding to take their steps towards them. For this reason, 3D modeling is the order of the day and it is necessary to know how to create figures that are as realistic as possible.

A human 3D model that does not have the correct proportions or does not follow the most natural looking patterns possible will not stand out, which can tarnish the work of the designer who has made it and throw away all the work and hours invested. To prevent this from happening, this program has been developed to gather all the theory necessary for the student to learn to represent and sculpt 3D models of human figures in a much more realistic and efficient way.

Thanks to the 100% modality of this qualification, the student will have neither fixed schedules nor the obligation to move to another physical location. You will be able to access a rich content that will help you achieve perfection in Anatomical 3D Modeling at any time of the day, balancing, at your own pace, your work and personal life with your academic life.

This **Postgraduate Certificate in Anatomical 3D Modeling** contains the most complete and up-to-date program on the market. The most important features include:

- ◆ The development of practical cases presented by experts in Anatomical 3D 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



We simulate the conditions of a real workflow so that you can learn in a way that meets the needs of the industry"

“

Human anatomy is key for you to understand how the body works and take advantage of that to make great models”

The program includes in its teaching staff professionals from the sector who bring to this training the experience of their work, as well as recognized 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 during the academic year. For this purpose, the student will be assisted by an innovative interactive video system created by renowned and experienced experts.

Knowing every detail of the body to get the best out of it makes the difference between a mediocre artist and a great artist.

This program will give you the guidelines to create hyper-realistic 3D figures that will stand out in any video game.



02

Objectives

The design of the program will allow the graduate to expand their knowledge in the creation of 3D figures, through the investigation of human anatomy, both male and female. This will be of great help to the student to develop the human body in high detail and sculpt the face in a hyper-realistic way. All this, under the creation of an optimal and dynamic work, acquiring the most demanded skills and knowledge in the 3D industry.





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You will be able to sculpt any human character, whether realistic or science fiction, with perfect precision to represent all its detail”



General Objectives

- ◆ Expand knowledge of human and animal anatomy in order to develop hyper-realistic creatures
- ◆ Master the 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

- ◆ Investigate both male and female human anatomy
- ◆ Develop the highly detailed human body
- ◆ Hyper-realistic face sculpting

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*Make a difference with TECH.
This is your opportunity to
specialize in a highly demanded
sector in the audiovisual industry”*

03

Course Management

In pursuit of excellence, TECH has brought together teachers who have extensive experience in different types of design work for both the video game industry and for animation and scene creation in various projects such as film. Thanks to this professional experience, the student benefits from studying a theory adapted to the realities of today's market, mastering the aspects most in demand by companies and that are not taught in traditional computer science faculties.





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This program is based on an extensive collection of experience of 3D modeling professionals to manage and organize the module covered by this Postgraduate Certificate"

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's Degree in 3D Art, Animation and Visual Effects for video games and cinema at CEV School of Communication, Image and Sound



04

Structure and Content

The syllabus has been designed on the basis of the requirements of computer science applied to the specificity of the organic 3D modeling sector, therefore bringing together a study plan whose modules offer a broad perspective of both the anatomical differences between genders and sizes, as well as the sculpting of hands and legs. For this purpose, composition and polishing techniques of human figures will be learned.



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You will be able to update your knowledge to be able to deal with supervision and technical management”

Module 1. Anatomy

- 1.1. General Skeletal Masses, Proportions
 - 1.1.1. Bones
 - 1.1.2. The Human Face
 - 1.1.3. Anatomical Canons
- 1.2. Anatomical Differences between Genders and Sizes
 - 1.2.1. Shapes Applied to Characters
 - 1.2.2. Curves and Straight Lines
 - 1.2.3. Behavior of Bones, Muscles and Skin
- 1.3. The Head
 - 1.3.1. The Skull
 - 1.3.2. Muscles of the Head
 - 1.3.3. Layers: Skin, Bone and Muscle Facial Expressions
- 1.4. The Torso
 - 1.4.1. Torso Musculature
 - 1.4.2. Central Axis of the Body
 - 1.4.3. Different Torsos
- 1.5. The Arms
 - 1.5.1. Joints: Shoulder, Elbow and Wrist
 - 1.5.2. Arm Muscle Behavior
 - 1.5.3. Detail of the Skin
- 1.6. Hand Sculpting
 - 1.6.1. Hand Bones
 - 1.6.2. Hand Muscles and Tendons
 - 1.6.3. Hand Skin and Wrinkles
- 1.7. Leg Sculpting
 - 1.7.1. Joints: Hip, Knee and Ankle
 - 1.7.2. Muscles of the Leg
 - 1.7.3. Detail of the Skin
- 1.8. Los pies
 - 1.8.1. Bone Construction for the Foot
 - 1.8.2. Foot Muscles and Tendons
 - 1.8.3. Foot Skin and Wrinkles
- 1.9. Whole Human Figure Composition
 - 1.9.1. Complete Creation of a Human Base
 - 1.9.2. Joint and Muscle Attachment
 - 1.9.3. Skin Composition, Pores and Wrinkles
- 1.10. Complete Human Model
 - 1.10.1. Model Polishing
 - 1.10.2. Hyper Skin Detail
 - 1.10.3. Composition



The Postgraduate Certificate will provide the student with the necessary updating of skills in a constantly evolving environment



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.



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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"

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.



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

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 Certificate in Anatomical 3D Modeling guarantees students, in addition to the most rigorous and up-to-date education, access to a Postgraduate Certificate issued by TECH Technological University.



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Successfully complete this program and receive your university qualification without having to travel or fill out laborious paperwork”

This **Postgraduate Certificate in Anatomical 3D Modeling** contains the most complete and up-to-date program on the market.

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

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

Title: **Postgraduate Certificate in Anatomical 3D Modeling**

Official N° of Hours: **150 h.**



*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.

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



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