

Postgraduate Certificate  
Digital Sculpture  
of Animals and Creatures



## Postgraduate Certificate Digital Sculpture of Animals and Creatures

- » 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/digital-sculpture-animals-creatures](http://www.techtute.com/us/information-technology/postgraduate-certificate/digital-sculpture-animals-creatures)

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# 01 Introduction

The digital sculpture of animals and creatures has more and more applications in different fields and, although it is likely that the first thing that comes to mind is its application in animation, video games or cinema, the representation can be found ready for other areas such as 3D printing, infoarchitecture or the development of specific plans and models. Therefore, this complete educational plan lays the foundations for the elaboration of these figures through digital sculpture, starting from the study of animal anatomy, masses and composition materials and textures, to the animal imaginary and fantastic animals, with the subsequent rendering of the productions. The training is offered in an online format to ensure convenient, flexible and practical learning.



A close-up photograph of an elephant's trunk and the surrounding skin. The trunk is thick and wrinkled, with a textured surface. The skin is grey and has a complex, cracked pattern. The image is partially obscured by a teal geometric shape in the top right corner.

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*Learn how to model animals and creatures through digital sculpting with this comprehensive online curriculum"*

The multiple applications that digital sculpture currently has, make three-dimensional modeling gain importance as a niche market. As interest in virtual representations of shapes, objects and figures grows, so does the demand for professionals versed in the field. Therefore, this Postgraduate Certificate in Digital Sculpture of Animals and Creatures, meets the knowledge and notions necessary for the graduate student to become an expert modeler in this area.

The study plan begins by delving into the most introductory and theoretical contents, such as the study of animal anatomy, to continue delving into imaginary animals and fantastic creatures. It also dwells on the study of the masses and materials involved in the elaboration of these figures, on the textures and realistic renderings of animals and humans.

The objective of this training is that students learn about human and animal anatomy to apply it to modeling, texturing, lighting and rendering processes of animals and creatures, as well as the mastery of various organic modeling systems to ensure the best results.

This Postgraduate Certificate in Digital Sculpture of Animals and Creatures is designed in a completely online format, to make it easier to reconcile learning with other professional and personal projects. With a teaching system based on a relearning and learning by doing methodology, the aim is for the student to achieve an autonomous and progressive acquisition of knowledge.

This **Postgraduate Certificate in Digital Sculpture of Animals and Creatures** 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



*Looking to specialize in digital sculpting of animals and creatures? This Postgraduate Certificate is the most complete and flexible that you will find in the academic market"*

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*This Postgraduate Certificate in Digital Sculpture of Animals and Creatures is taught in online mode, to make it easier to reconcile it with other professional and personal projects"*

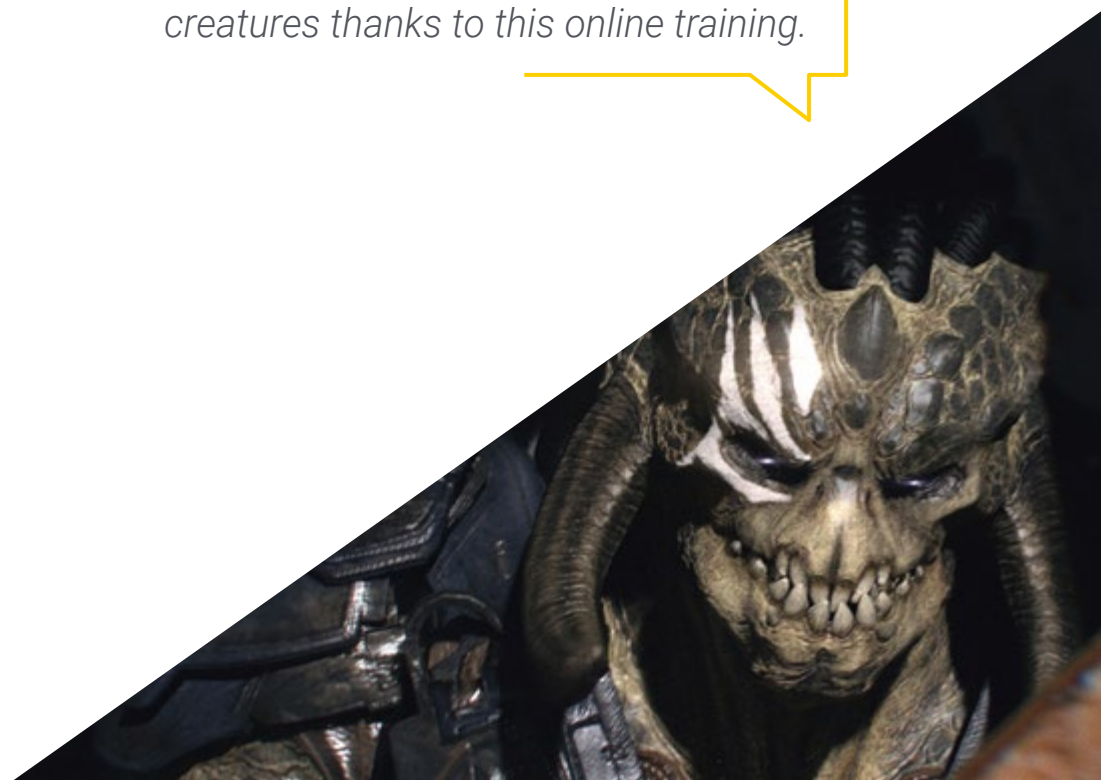
The program's teaching staff includes professionals from the sector who contribute their work experience to this training program, as well as renowned specialists from leading societies and prestigious universities.

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.

*TECH guarantees the progressive and autonomous learning of the student, through its methodology based on relearning and learning by doing.*

*Make your portfolio stand out in the creation of fantastic animals and creatures thanks to this online training.*



# 02 Objectives

This Postgraduate Certificate in Digital Sculpting of Animals and Creatures focuses on the graduate student's ability to model, texture, render and illuminate three-dimensional creations of animals and fantastic creatures. Among other objectives, the mastery and management of the application of anatomy to animal sculpture, the application of the correct animal topology of the models to be used in the subsequent design process, as well as the evolution of animals and humans into fantastic animals, hybridizations and mechanical beings. The curriculum also dwells on the use and understanding of specific and appropriate modeling tools.







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*Get to model, texture, render and light your 3D animal and fantasy creature designs with this comprehensive curriculum"*



## General Objectives

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- ◆ Knowledge of human and animal anatomy to apply it to modeling, texturing, lighting and rendering processes in an accurate way
- ◆ Understand the need for a good topology at all levels of development and production
- ◆ Creation of realistic and cartoon-like characters of high quality
- ◆ Advanced handling and use of various organic modeling systems
- ◆ Understand current systems in the film and video game industry to deliver great results





## Specific Objectives

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- ◆ Handle and apply anatomy to animal sculpture
- ◆ Apply the correct animal topology of models to be used in 3D animation, video games and 3D printing
- ◆ Sculpting and texturing animal surfaces such as: feathers, scales, skins, fur and refinement of animal hair
- ◆ Perform the evolution of animals and humans to fantastic animals, hybridizations and mechanical beings, shape sculpting and the use of Substance Painter
- ◆ Handling photorealistic and non-photorealistic rendering of animals in Arnold

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*Online and with all the didactic material available for you to advance at your own speed in the content: the Diploma in Digital Sculpture of Animals and Creatures that you were waiting for”*

# 03 Course Management

This Postgraduate Certificate in Digital Sculpture of Animals and Creatures has the expertise of a teaching staff made up of the most prestigious professionals in the field of digital sculpture and three-dimensional modeling. The faculty will accompany the student throughout the learning process, with live connections through chats and forums, and will make available to the students all the pedagogical and didactic material to ensure effective learning. They are professionals who have dedicated a large part of their careers to researching and applying the most avant-garde techniques in digital sculpture, so you learn not only from the syllabus, but also from the teachers' own experience.





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*Learn from the experience of the great professionals in digital sculpture who are part of the faculty of this Diploma"*

## 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 GF3S 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's Degree in Computer Graphics, Games and Virtual Reality URJC University. Madrid



# 04 Structure and Content

The structure of this Postgraduate Certificate is organized based on the knowledge and notions necessary to become a true professional in Digital Sculpture of Animals and Creatures. Starting from the analysis of the anatomy of animals and humans, the study of the masses and textures that compose these figures, the decomposition of animal parts and the deepening of imaginary fantastic creatures. All this, distributed in 10 subsections that will be completed and will guarantee the autonomous and progressive learning of the student.





A close-up photograph of a lion's mane, showing the texture and color of the fur. The image is partially obscured by a diagonal split in the background, with a greyish-brown area on the left and a teal area on the right.

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*this Postgraduate Certificate is organized based on the knowledge and notions necessary to become a true professional in Digital Sculpture of Animals and Creatures”*

## Module 1. Animals and Creatures

- 1.1. Animal Anatomy for Modelers
  - 1.1.1. Proportion Research
  - 1.1.2. Anatomic Differences
  - 1.1.3. Musculature of the Different Families
- 1.2. Main Masses
  - 1.2.1. Main Structures
  - 1.2.2. Balance Axis Postures
  - 1.2.3. Base Mesh with ZSpheres
- 1.3. Head
  - 1.3.1. Craniums
  - 1.3.2. Jaws
  - 1.3.3. Teeth and Antlers
  - 1.3.4. Rib Cage, Spine and Hips
- 1.4. Central Zone
  - 1.4.1. Rib Cage
  - 1.4.2. Spinal Column
  - 1.4.3. Hips
- 1.5. Extremities
  - 1.5.1. Legs and Hooves
  - 1.5.2. Fins
  - 1.5.3. Wings and Claws
- 1.6. Animal Texture and Adaptation to Shapes
  - 1.6.1. Skin and Hair
  - 1.6.2. Scales
  - 1.6.3. Feathers





- 1.7. The Animal Imaginary: Anatomy and Geometry
  - 1.7.1. Anatomy of Fantastic Beings
  - 1.7.2. Geometry and SliceCuts
  - 1.7.3. Mesh Booleans
- 1.8. The Animal Imaginary: Fantastic Animals
  - 1.8.1. Fantastic Animals
  - 1.8.2. Hybridizations
  - 1.8.3. Mechanical Beings
- 1.9. NPR Species
  - 1.9.1. Cartoon Style
  - 1.9.2. Anime
  - 1.9.3. FanArt
- 1.10. Animal and Human Rendering
  - 1.10.1. Sub Surface Scattering Materials
  - 1.10.2. Mixing Texturing Techniques
  - 1.10.3. Final Compositions

“ *Have you made up your mind?  
Become in only 6 weeks a specialist  
in modeling animals and creatures  
through digital sculpting*”

# 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.

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*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 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 Digital Sculpture of Animals and Creatures guarantees students, in addition to the most rigorous and up-to-date education, access to a Postgraduate Certificate issued by TECH Global University.



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*Successfully complete this training program and receive your diploma without travel or laborious paperwork”*

This program will allow you to obtain your **Postgraduate Certificate in Digital Sculpture of Animals and Creatures** 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 Digital Sculpture of Animals and Creatures**

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

**tech** global  
university

## Postgraduate Certificate Digital Sculpture of Animals and Creatures

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

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