

Postgraduate Certificate

Hair Creation for Video Games and 3D Movies



Postgraduate Certificate Hair Creation for Video Games and 3D Movies

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

Website: www.techtute.com/us/design/postgraduate-certificate/hair-creation-video-games-3d-movies

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01

Introduction

Hair is one of the essential elements for any character or creature. In addition to adding realism, it can even define the personality of the subject in question, depending on the type of hairstyle applied and the techniques used to represent it. It is therefore important for design professionals to improve their techniques in this area, in order to give their 3D models a better appearance. In this TECH qualification, the student will find a superior syllabus that makes a tour of programs such as ZBrush or XGen, used in the field of video games and 3D movies where the graduate will be able to stand out with their own projects of high quality textures, shapes and hairstyles of characters.





“

Your models will come to life by giving them unique hairstyles that will make them stand out in a much more eye-catching way”

For a character to really convey its identity, all the elements that compose it must reinforce its personality and ideas. One of the most striking features to highlight the personality of a model is its hairstyle, as it is one of the first things the public usually notices.

3D modeling professionals must have advanced knowledge in hair creation for different types of industry if their goal is to grow professionally or to realize quality projects of their own. For this reason, TECH has developed this qualification with the help of experts in digital sculpting who have put all their theoretical and practical knowledge into a complete Postgraduate Certificate.

Thanks to the knowledge acquired by the student during this program, their professional performance when creating hair and hairstyles will improve significantly, which will lead to a job promotion within their own department and a better final result of their personal projects.

A great opportunity for all designers who are looking for an economic or professional improvement in their field, as it is a completely online qualification that can be perfectly combined with professional responsibilities. The student has access to all content from any internet-enabled device for the duration of the program.

This **Postgraduate Certificate in Hair Creation for Video Games and 3D Movies** contains the most complete and up-to-date educational program on the market. Its most notable features are:

- ◆ The development of case studies presented by experts in 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
- ◆ Access to content from any fixed or portable device with an Internet connection.



You will be a more outstanding professional in your field thanks to an advanced knowledge in Hair Creation for Video Games and 3D Movies”

“

This is the best opportunity to climb the ladder in the world of design by bringing creative solutions to the creation of three-dimensional hair”

The program's teaching staff includes professionals from 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 throughout the program. For this purpose, the student will be assisted by an innovative interactive video system created by renowned and experienced experts.

Your characters will be the most eye-catching in the whole animation scene thanks to the care you will put into their hair and features.

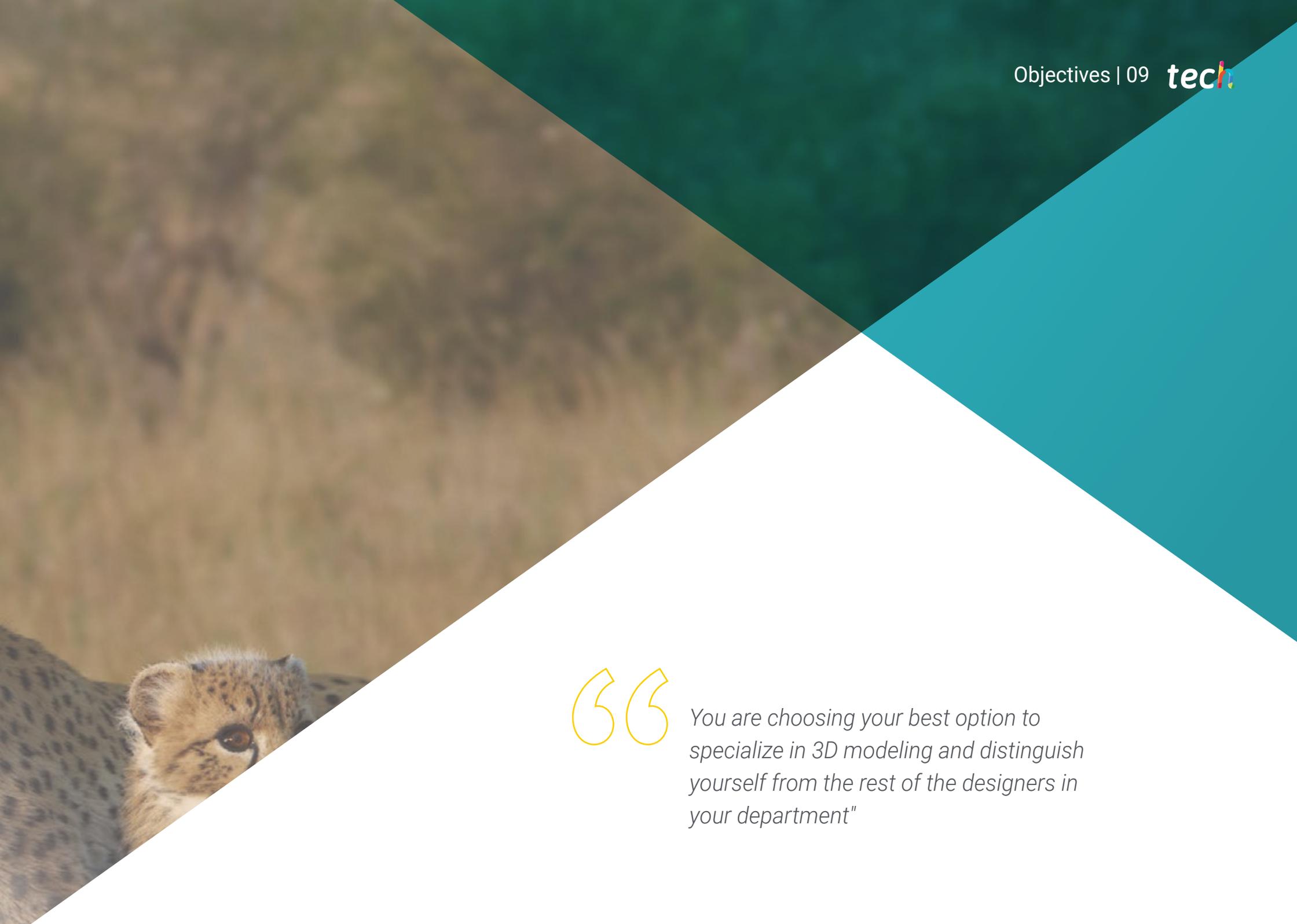
Being an expert in such a specific area of 3D model creation, you will have at your disposal a multitude of opportunities for job improvement.



02 Objectives

The main objective of this qualification is to offer the student a specialized and first level training with which, in addition to improving their work and personal performance, they can have more possibilities of professional growth by modeling characters and creatures with a marked and distinctive coat. The students will make quality their personal standard, showing as much creativity as possible when undertaking 3D modeling projects involving characters and creatures with very specific hair.



A cheetah cub is visible in the bottom left corner, looking towards the right. The background is a blurred savanna landscape. The page is divided into three main sections: a dark teal top right, a light teal bottom right, and a white bottom left.

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You are choosing your best option to specialize in 3D modeling and distinguish yourself from the rest of the designers in your department”



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

- ◆ Delve into the advanced use of Xgen in Maya
- ◆ Create hair for movies
- ◆ Studying hair using Cards for video games
- ◆ Develop your own hair textures
- ◆ See the different use of hairbrushes in ZBrush

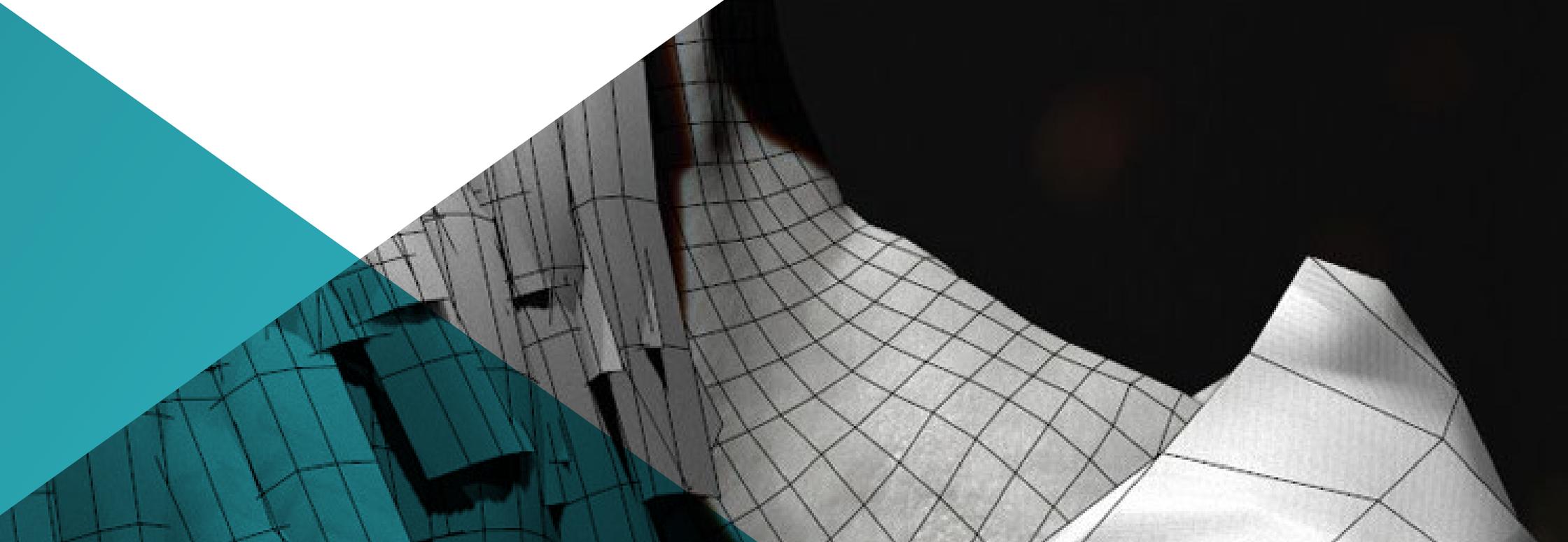
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It won't take you long to reach your personal goal of career advancement by demonstrating to your superiors that you are capable of tackling modeling projects with an innovative and effective work methodology”

03

Course Management

This Postgraduate Certificate in Hair Creation for Video Games and 3D Movies is directed by a professional team carefully selected by TECH. Its extensive experience designing all types of 3D models, including advanced hair creation techniques, means that the teaching content benefits from a real perspective adapted to the most current market demands. The student will be mentored at all times by a teaching staff that wants to see them grow within their industry, achieving great feats with careful and detailed models.



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Take advantage of the extensive experience of TECH's faculty to help you to move up in the 3D design field”

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

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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 video games and cinema at CEV School of Communication, Image and Sound



04

Structure and Content

Following the most innovative and technological educational methodology, TECH ensures that all its programs meet the most demanding quality requirements. Therefore, students will find here a qualification with advanced knowledge in XGen, Hair Shading or optimized rendering, among other skills that will help them to improve their workflow and increase the performance of their own personal projects.





“

You will find a plenitude of real examples with which to learn how to create realistic and detailed hair in a contextual way"

Module 1. Hair Creation for Video Games and Movies

- 1.1. Differences Between Videogame Hair and Film Hair
 - 1.1.1. FiberMesh and Cards
 - 1.1.2. Tools for Hair Creation
 - 1.1.3. Hair Software
- 1.2. ZBrush Hair Sculpting
 - 1.2.1. Basic Shapes for Hairstyles
 - 1.2.2. Creating Brushes in ZBrush for Hair
 - 1.2.3. Curve Brushes
- 1.3. Hair Creation in XGen
 - 1.3.1. XGen
 - 1.3.2. Collections and Descriptions
 - 1.3.3. Hair vs. Grooming
- 1.4. XGen Modifiers: Adding Realism to Hair
 - 1.4.1. Clumping
 - 1.4.2. Coil
 - 1.4.3. Hair Guides
- 1.5. Color and Region Maps: for Absolute Hair Control
 - 1.5.1. Maps of Hair Regions
 - 1.5.2. Cuts: Curly, Shaved and Long Hair
 - 1.5.3. Micro Detail: Facial Hair
- 1.6. Advanced XGen: Use of Expressions and Refinement
 - 1.6.1. Expressions
 - 1.6.2. Utilities
 - 1.6.3. Hair Refinement
- 1.7. Cards Placement in Maya for Videogame Modeling
 - 1.7.1. Fibers in Cards
 - 1.7.2. Cards by Hand
 - 1.7.3. Cards and Real-Time Engine





- 1.8. Optimization for Movies
 - 1.8.1. Optimization of the Hair and its Geometry
 - 1.8.2. Preparation for Physics with Movements
 - 1.8.3. XGen Brushes
- 1.9. Hair Shading
 - 1.9.1. Arnold Shader
 - 1.9.2. Hyper-Realistic Look
 - 1.9.3. Hair Treatment
- 1.10. Render
 - 1.10.1. Rendering When Using XGen
 - 1.10.2. Lighting
 - 1.10.3. Noise Elimination



Enroll today in this Postgraduate Certificate and lay the foundation for your future career advancement in the 3D design industry”

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 is the most widely used learning system in the best faculties in the world. 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 we face in the case method, an action-oriented learning method. Throughout the program, the studies 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 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.



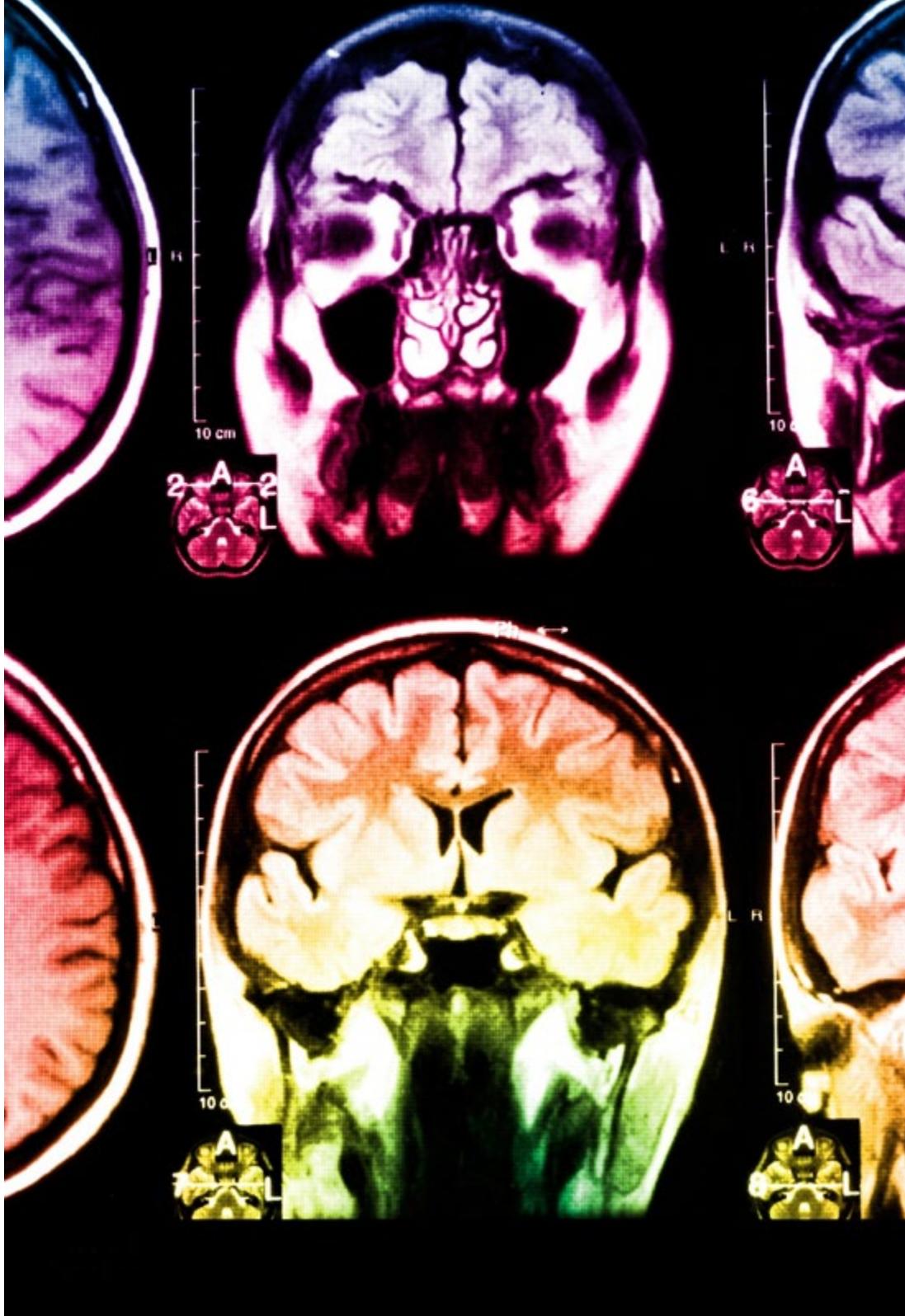
In our program, learning is not a linear process, but rather a spiral (learn, unlearn, forget, and re-learn). Therefore, we combine each of these elements concentrically.

With this methodology we have 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, markets, and financial 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.

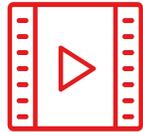
Relearning will allow you to learn with less effort and better performance, involving you more in your training, developing a critical mindset, defending arguments, and contrasting opinions: a direct equation for success.

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.



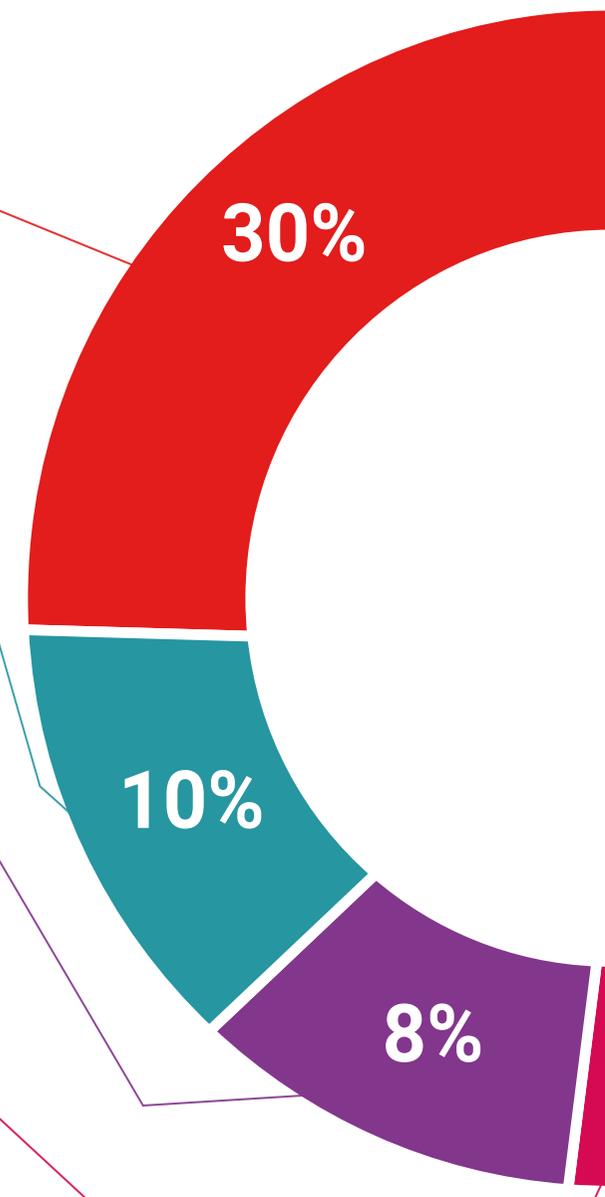
Practising Skills and Abilities

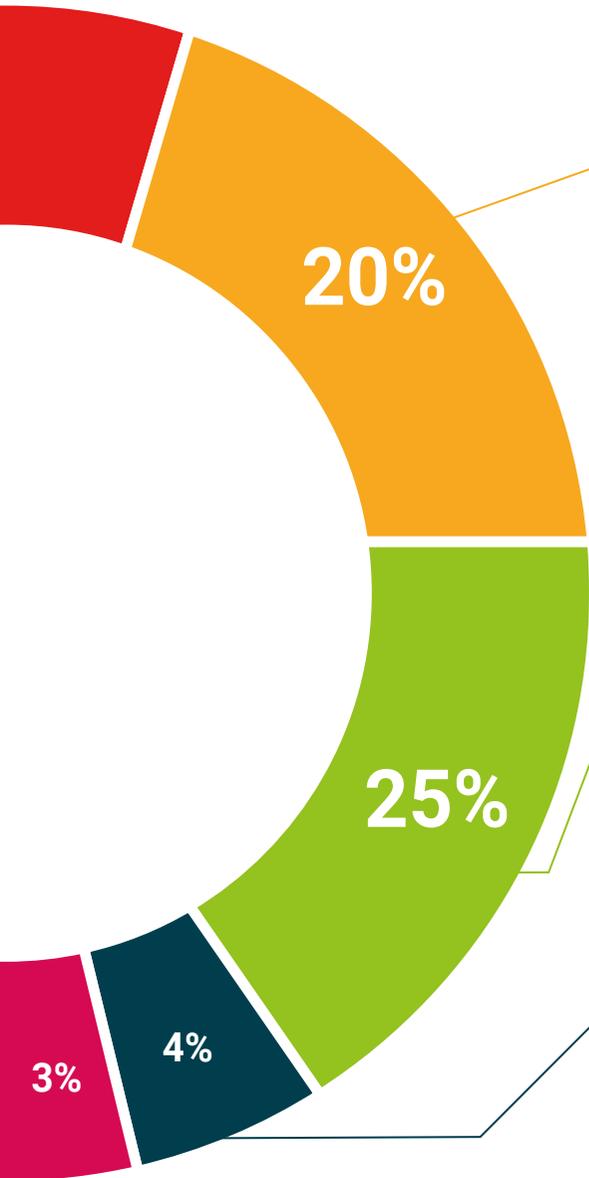
They will carry out activities to develop specific skills and abilities in each subject area. Exercises and activities to acquire and develop the skills and abilities that a specialist needs to develop in the context of the globalization that we are experiencing.



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 Hair Creation for Video Games and 3D Movies guarantees students, in addition to the most rigorous and up-to-date training, access to a Postgraduate Certificate issued by TECH Global University.



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

This program will allow you to obtain your **Postgraduate Certificate in Hair Creation for Video Games and 3D Movies** 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 Hair Creation for Video Games and 3D Movies**

Modality: **online**

Duration: **6 weeks**

Accreditation: **6 ECTS**



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



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Postgraduate Certificate

Hair Creation for Video
Games and 3D Movies