

# Postgraduate Certificate

## Modeling for Hair, Apparel and Accessories



## Postgraduate Certificate Modeling for Hair, Apparel and Accessories

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

Website: [www.techtitute.com/in/design/postgraduate-certificate/modeling-hair-apparel-accessories](http://www.techtitute.com/in/design/postgraduate-certificate/modeling-hair-apparel-accessories)

# 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

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*p. 28*

# 01

# Introduction

Due to incredible market growth and industry demands in digital art, it is becoming increasingly important to create models with greater realism. To achieve this, elements of vital importance such as clothing, hair or accessories are used, making the character and definition of the characters visible. In this program it will be possible to learn different techniques from the classic format with its different 3D modeling tools, the use of textures, physical simulations such as Fibermesh combined with Hair and fur or Xgen. Generate highly accurate images in hair and fabric simulation. All this, through an online study modality with certified effectiveness in 6 weeks.







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*Manage Hair, Clothing and Accessory  
Modeling techniques to ensure that your  
character designs have character”*

In stories, and in real life, hair, clothes and accessories define an individual's personality. In the case of digital art, it is customary to see how the features of the creatures evolve. With the dynamism of today's industry and technological advancement, it is possible to create to perfection, whatever the imagination devises.

In this program, students will be able to understand the techniques to be used depending on the medium to be modeled. In the case of hair: you will learn from the classic format through the use of modeling brushes for 3D printing, to the use of opacity textures for Low Poly in the field of video games such as Cards or physical simulations such as Fibermesh, combined with Hair and fur or Xgen, ideal for high-budget 3D animations.

In the case of clothing, you will master working from opacity map formats, as well as modeling to suit Realtime projects or physical simulations by creating sculpts based on automatic formats in Marvelous Designer software. You will also learn how to use the ideal CGI program to create custom outfits in a matter of minutes.

Finally, rendering these elements through global illumination engines will allow highly accurate images to be generated in hair and fabric simulation, by means of these materials and PBR texture systems.

All this and more is available in the content of this 6-week program, taught through an innovative, completely online study methodology, implemented by TECH Technological University, which allows professionals continuous and efficient training through the use of devices of their choice with an internet connection and the guidance of an expert teaching team at all times.

This **Postgraduate Certificate in Modeling for Hair, Apparel and Accessories** contains the most complete and up-to-date program on the market. Its most notable features are:

- ◆ Practical cases presented by experts in 3D modeling and digital sculpture.
- ◆ The graphic, schematic, and 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



*Learn how to operate the CGI program and create custom outfits in a matter of minutes by quickly simulating fabric and lighting accurately"*

“ *With this Postgraduate Certificate you will be able model, texturize, light and render clothing, hair and accessories in Arnold. Start your training today”*

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 immersion 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. This will be done with the help of an innovative system of interactive videos made by renowned experts.

*Master the creation of highly accurate images in hair and fabric simulation using PBR texture systems.*

*At TECH you have the support of teachers who are experts in the subject of study. Interact in a quality, 100% online secure environment.*





# 02 Objectives

This Postgraduate Certificate aims to open the doors of professionalization to the student, by allowing them to acquire in-depth knowledge of Hair, Clothes and Accessories Modeling. Fundamental aspects to generate a visual impact and remain in the memory of users; give personality and character to the characters by mastering the required techniques and tools.





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*Now is your time to become a professional. Boost your career in digital art to the next level”*



## General Objectives

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- ◆ Understand the necessity of having an adequate topology at all levels of development and production
- ◆ Understand human and animal anatomy to apply it to modeling, texturing, lighting and rendering processes in a precise way
- ◆ Meet the demands in the creation of hair and clothes for video games, cinema, 3D printing, augmented and virtual reality
- ◆ Operate modeling, texturing and lighting systems in virtual reality systems
- ◆ Understand the current demands of the movie and video game industries in order to offer best results





## Specific Objectives

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- ◆ Create modeled hair, Low Poly, High Poly, Fibermesh and Xgen in 3D Max, Zbrush and Maya for 3D printing, film and video games
- ◆ Model and simulate fabric physics in 3D Max and ZBrush
- ◆ In-depth study of Workflow between Zbrush and Marvelous
- ◆ Use clothes and create patterns in Marvelous Designer
- ◆ Manage physical simulations and exports/imports in Marvelous Designer
- ◆ Model, texturize, light and render clothing, hair and accessories in Arnold



*Open yourself to new job opportunities by completing this Postgraduate Certificate in a few weeks"*



# 03

# Course Management

To ensure that the learning process is developed properly, TECH Technological University has selected a high-level teaching staff composed of professional specialized in 3D subject of modeling. They convey their knowledge through innovative methods so that students learn the subjects in an effective way and are able to integrate them in their professional activities.





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*Leave your teaching in the hands of experts. TECH's methodology and professional faculty make it possible"*

## Management



### Mr. Sequeros Rodríguez, Salvador

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





# 04

## Structure and Content

Specialized theoretical and practical contents stand out in this syllabus, designed to teach everything related to the Modeling for Hair, Clothes and Accessories to the students of this Postgraduate Certificate. Available in a dynamic, secure and fully online environment during its 6 weeks duration. It allows students to perfectly combine their current routine with the professional training process. Thanks to the interactive content, you will master the techniques and tools that are taught in an effective way, making your experience much more agile. Students will be able to share in communities of specialists, forums, meeting rooms and private chats with your faculty, as well as downloading the syllabus for consultation without an internet connection.



“

*Become part of the community of professionals  
who work and study thanks to the TECH  
Technological University platform"*



## Module 1. Hair, Clothing and Accessories

- 1.1. Hair Creation
  - 1.1.1. Modeled Hairstyle
  - 1.1.2. Low Poly Hair and Cards
  - 1.1.3. High Poly, Fibermesh and Fur y XgenHair
- 1.2. Cartoon Clothing
  - 1.2.1. Mesh Extractions
  - 1.2.2. Falsified Geometry
  - 1.2.3. Shell
- 1.3. Fabric Sculpting
  - 1.3.1. Physical Simulation
  - 1.3.2. Force Calculation
  - 1.3.3. Curving Brushes on Clothing
- 1.4. Realistic Clothing
  - 1.4.1. Import into Marvelous Designer
  - 1.4.2. Software Philosophy
  - 1.4.3. Pattern Creation
- 1.5. Standard Patterns
  - 1.5.1. Jerseys
  - 1.5.2. Pants
  - 1.5.3. Coats and Footwear
- 1.6. Joining and Physics
  - 1.6.1. Realistic Simulations
  - 1.6.2. Zippers
  - 1.6.3. Seams





- 1.7. Apparel
  - 1.7.1. Complex Patterns
  - 1.7.2. Fabric Complexity
  - 1.7.3. Shading
- 1.8. Advanced Apparel
  - 1.8.1. Baking for Clothing
  - 1.8.2. Adaptation
  - 1.8.3. Export
- 1.9. Accessories
  - 1.9.1. Jewelry
  - 1.9.2. Backpacks and Handbags
  - 1.9.3. Accessories
- 1.10. Rendering on Fabrics and Hair
  - 1.10.1. Lighting and Shading
  - 1.10.2. Hair Shader
  - 1.10.3. Realistic Rendering using Arnold

“ Increase your professional value by enrolling in this TECH Certificate. Acquire knowledge that will make you stand out in your work 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.*



*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.



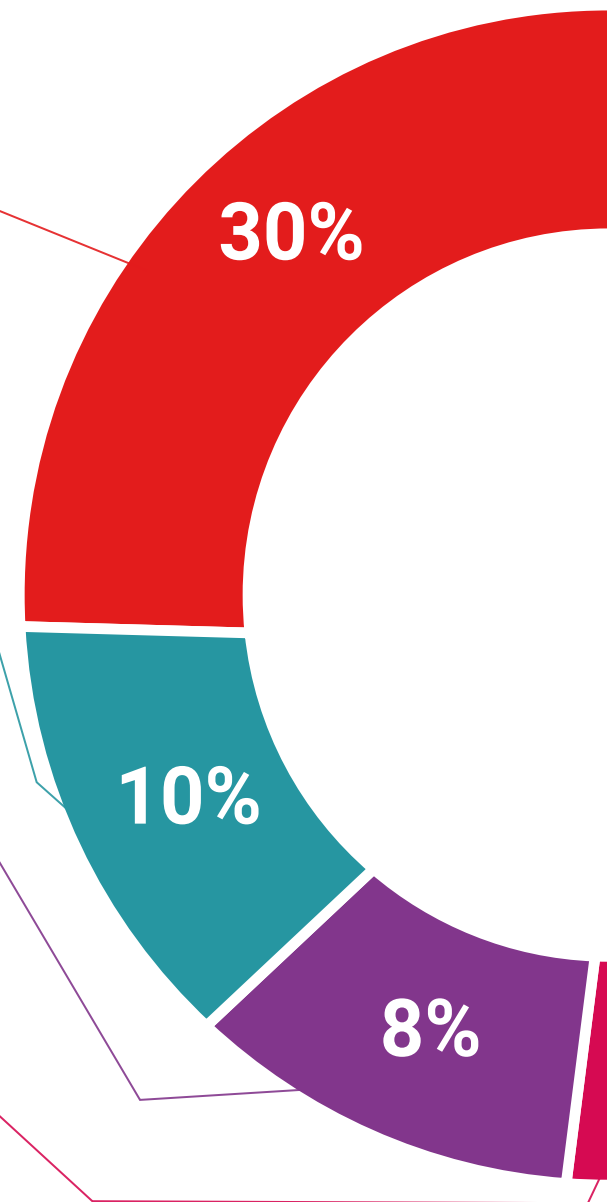
### Practising Skills and Abilities

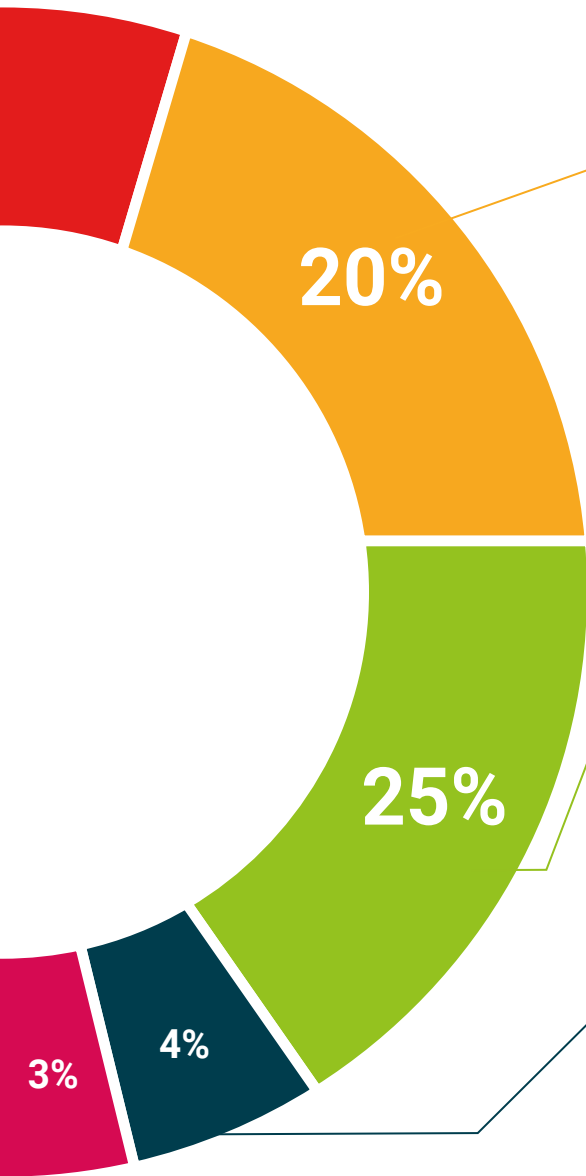
They will carry out activities to develop specific skills and abilities in each subject area. Exercises and activities to acquire and develop the skills and abilities that a specialist needs to develop in the context of the globalization that we are experiencing.



### 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 Modeling for Hair, Apparel and Accessories guarantees students, in addition to the most rigorous and up-to-date education, access to a qualification 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 and Hair, Apparel and Accessory 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 certificate 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 Hair, Apparel and Accessory Modeling**

Official N° of Hours: **150 h.**



\*Apostille Convention. In the event that the student wishes to have their paper certificate 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  
classroom



## Postgraduate Certificate Modeling for Hair, Apparel and Accessories

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

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