Postgraduate Certificate
Advanced Facial Rigging

tec*h* global university

![tech global university logo]

Postgraduate Certificate
Advanced Facial Rigging

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

Website: **www.techtitute.com/us/videogames/postgraduate-certificate/advanced-facial-rigging**

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01
Introduction

Facial rigging is one of a rigger's most complex tasks due to the diversity of systems and deformations that occur in the same area of the character. In addition, the realistic and expressive factor comes into play, something essential to cover in the right way, as it will be the focus of attention of a character and the main means for the animator to communicate the narrative. In this sense, the program includes methods of deformation and control of facial rigging, specific topics for each of the parts of the face and a final topic dedicated to the connection of the facial rig with the body rig. The content will be taught 100% online and without timetables, so that students can organize the course according to their own schedule.

> " *At TECH, we teach you how to work with Blend Shapes, the most realistic shading technique for characters"*

Creating believable facial expressions has always been one of the main goals of video game developers. Year after year, advances in the graphics section of video game consoles give greater possibilities to facial riggers. However, although the results are currently quite good, there is still a lot of room for further improvement of this technique.

For this reason, TECH has developed a comprehensive syllabus that addresses facial rigging from all possible perspectives. We will start by conducting a facial study and defining the deformation and control methods. Then, the Blend Shapes shading technique is explained.

Next, we will delve into facial control rigging, with the Joystick control set-up and the Set Driven Key tool. As well as in the rigging of jaw, tongue, lips, eyes, eyelids and hair.

Finally, a topic has been set aside to deal with automations, from their approach to their development. As well as to explain the connection between a facial rig and a body rig, the hierarchy of their deformers and the prevention of double transformations.

All this, through a 100% online methodology, without timetables and with the syllabus fully available from the first day. This makes it easier for the student to organize their time. Additionally, the content has been elaborated in a variety of formats, allowing the user to choose the one that best suits the circumstances and, as a result, favoring the assimilation of the learning process.

This **Postgraduate Certificate in Advanced Facial Rigging** contains the most complete and up-to-date educational program on the market. Its most notable features are:

◆ Practical case studies presented by experts in advanced facial rigging

◆ 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 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.

The syllabus of this Postgraduate Certificate begins with a facial study of the human being so that you can create expressions as realistic as possible"

At TECH, you will learn how to professionally use the Set Driven Key tool for facial control rigging"

In the topic dedicated to lip rigging you will learn how to perform influence painting and how to use the wire deformer.

TECH teachers will teach you how to create a Sticky Lips system in Maya to make your character's lips as realistic as possible.
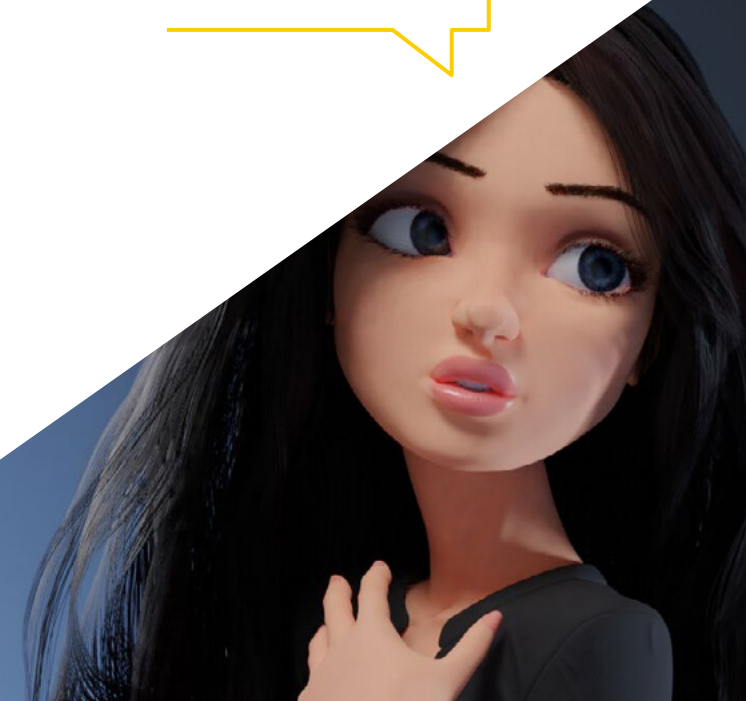
The program's teaching staff includes professionals from the sector who contribute their work experience to this training program, as well as renowned specialists from leading societies and prestigious universities.

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.

Objectives

Graduates from the Postgraduate Certificate in Advanced Facial Rigging will be prepared to carry out facial rigging assignments with complete confidence. They will know the anatomical peculiarities of the different elements of the face and will know how to establish the methods of facial control and deformation. Furthermore, they will have learned to connect the facial rig with the body rig and to perform certain automations that will lighten the workload.

"The syllabus has reserved two specific topics to deal with the rig of the mouth and the rig of the eyes, the two most mobile elements of the face"

General Objectives

- Acquire advanced rigging techniques for 3D characters.
- Learn how to use the latest software
- Analyze 3D models for rigging purposes
- Propose systems and mechanisms of the character adjusted to the nature of the production
- Provide the tools and specialized skills to tackle rigging jobs in film or video games.

In this course you will learn how to create geometric hair systems, as well as more realistic systems generated with XGen"
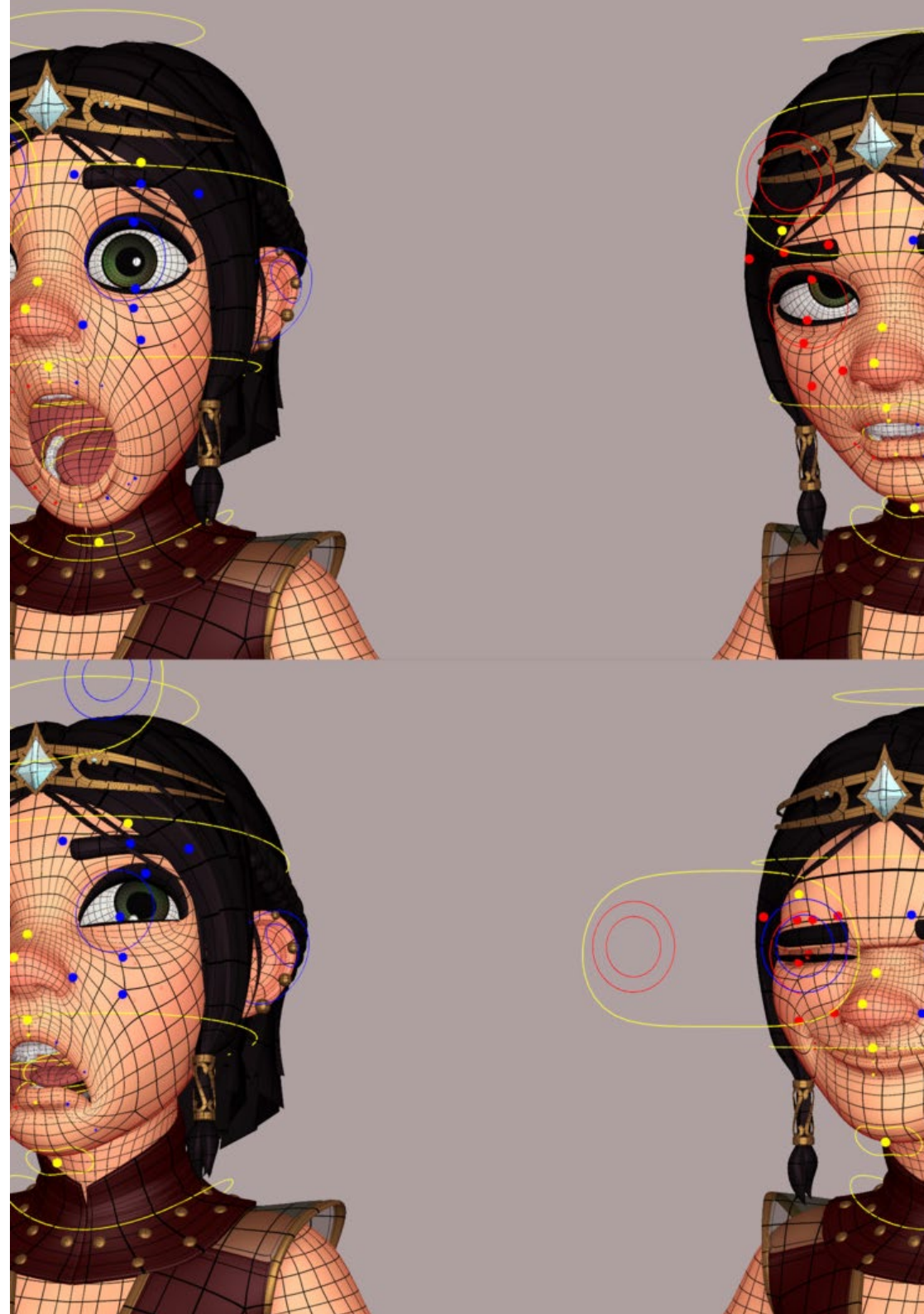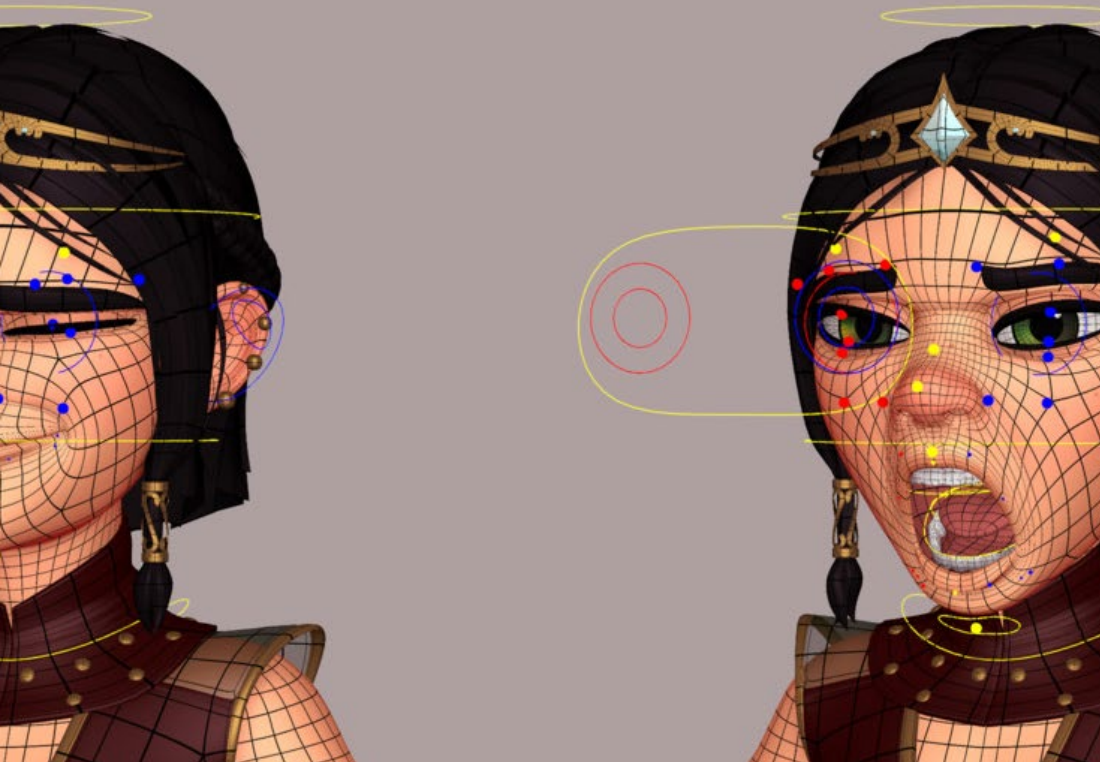
Specific Objectives

- Identify and analyze the anatomy and facial expressions of the human body
- Introduce different types of rig facial deformation systems
- Introduce different types of facial rig control systems
- Develop Blend Shapes systems, from modeling to configuration.
- Developing a rig system for jaw and tongue
- Develop an advanced lip rig system with Sticky Lips capability
- Developing eye rig and eyelid movement
- Automate facial systems
- Incorporate dynamic systems for character hair rigging
- Connecting the facial rig to the body rig

03
Course Management

The teachers of this course are professionals in the sector with a proven track record. Experts with extensive experience in the field of facial rigging and a broad knowledge of facial anatomy. This allows students to ask the most technical questions about any of the parts of the face.

The faculty will accompany you through the entire process of creating a facial rig. From the anatomical study to its connection with the body rig"

International Guest Director

Jessica Bzonek is a leading designer and creator of 3D characters, with more than ten years of experience in the video game industry that have established her as an influential professional in the international scene. In fact, her career has been characterized by her commitment to innovation and collaboration, fundamental aspects in her work, where technology and art are creatively intertwined. She has contributed to the realization of important animation projects, including "Avatar: Frontiers of Pandora" and "The Division 2: Year 4", which has consolidated her reputation as an expert in the creation of pipelines and rigging.

She has also held the position of Associate Technical Director of Cinematics at Ubisoft Toronto, where she has been essential in the production of high-quality cinematic sequences. Here, she has been particularly noted for her participation as a co-presenter at the 2024 Ubisoft Developers Conference, a testament to her leadership in the industry. She has also played a crucial role at Stellar Creative Lab, where she co-developed a custom automated system for character rigs. In this regard, her ability to manage the communication of issues and solutions between departments has been instrumental in optimizing workflows.

Jessica Bzonek's career has also included significant work at DHX Media, where she has worked closely with supervisors and other pipeline workers to solve problems and test new tools, organizing learning sessions that have promoted team cohesion. At Rainmaker Entertainment Inc. he has developed character and element rigs, using a modular rigging system that has improved the functionality of the production process. Finally, her work as a Junior Rigging Artist, at Bardel Entertainment, has allowed her to develop scripts to optimize the workflow.

Ms. Bzonek, Jessica

- Associate Technical Director of Cinematics at Ubisoft, Toronto, Canada
- Technical Director of Pipeline / Rigging at Stellar Creative Lab
- Pipeline Technical Director at DHX Media
- Character Pipeline Technical Director at DHX Media
- Creature Pipeline Technical Director at Rainmaker Entertainment Inc.
- Junior Rigging Artist at Bardel Entertainment
- Course in 3D Animation and Visual Effects at the Vancouver Film School
- Course in Advanced Character Rigging by Gnomon
- Course in Introduction to Python by UBC - Continuing Education
- B.A. in Multimedia and History from McMaster University

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

Management

Mr. Guerrero Cobos, Alberto

- Current professor of 3D Animation, Games and Interactive Environments at ILERNA Seville.
- Content creator for Character Rigging and 3D Animation Course at MasterD
- Rigger and animator in Vestigion, videogame developed by Lovem Games
- Technical coordinator in 3D animation, games and interactive environments at Atlántida Formación
- Degree in Multimedia and Graphic Design in ESNE
- Master of Arts - Animation Production at the University of South Wales
- Master in 3D Character Modeling at ANIMUM
- Master's Degree in 3D Character Animation for Film and Video Games at ANIMUM
- Advanced 3D Character Rigging Course in Autodesk Maya in ANIMUM

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Structure and Content

This course introduces the methods of deformation and control of a facial rig, as well as the study of facial expressions. Next, delve into each of the elements that make up the face. For example, raising the Sticky Lips system or the deformation rigging and eye control. Finally, the benefits and some examples of facial automations are developed and we teach how to connect the facial rig with the body rig.
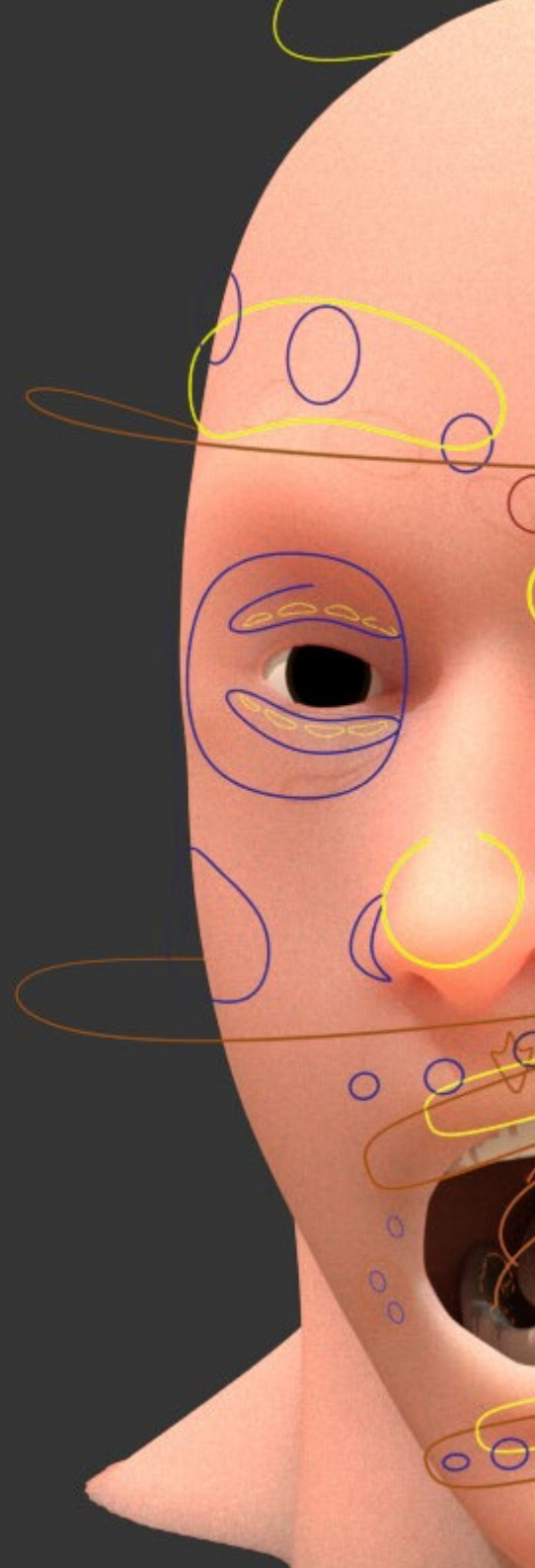
Getting the mouth to move believably when a character speaks is tricky. Learn all the tricks you need to know with the topics dedicated to lip, jaw and tongue rigging"

Module 1. Advanced Facial Rigging

1.1. Facial Rig
    1.1.1. Deformation Methods
    1.1.2. Control Methods
    1.1.3. Facial Expression Study

1.2. Facial Rigging Using Blend Shapes
    1.2.1. Key Shapes Facial Partition
    1.2.2. Muscle Movement Modeling
    1.2.3. Deformation Distribution Blend Shapes

1.3. Facial Control Rigging
    1.3.1. Joystick Set-up
    1.3.2. Facial Controls
    1.3.3. Set Driven Key Tool

1.4. Jaw and Tongue Rigging
    1.4.1. Anatomical Study and Approach
    1.4.2. Jaw Deformation and Jaw Control
    1.4.3. Tongue Deformation and Control

1.5. Lip Rigging
    1.5.1. System Approach
    1.5.2. Deformer Wire and Controls
    1.5.3. Painting of Influences

1.6. Sticky Lips System
    1.6.1. *Sticky Lips*
    1.6.2. System Approach
    1.6.3. Development

1.7. Automation
    1.7.1. Benefits and Examples of Facial Automation
    1.7.2. Approach
    1.7.3. Development

"
Generating character hair can become a cumbersome and complex task. At TECH, we teach you how to create it intuitively and quickly with XGen"
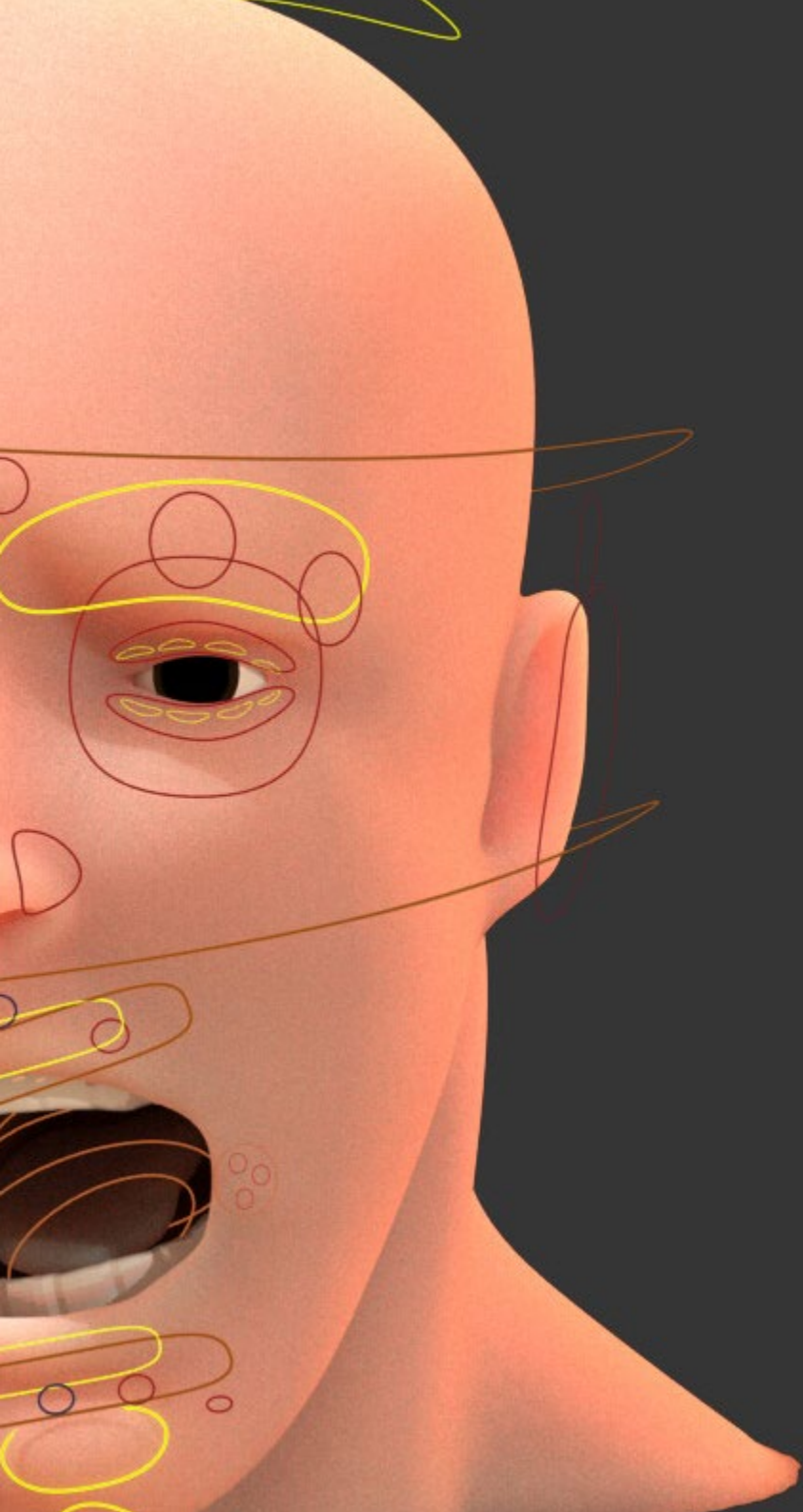
05
Methodology

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.

"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 Video Game Design 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 case method has been the most widely used learning system among the world's leading business 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. Over the course of 4 years, you will be presented with multiple practical case studies. You will have to combine all your knowledge, and research, argue, and defend your ideas and decisions.

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

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.

01 learning from evidence

02 relearning from evidence

03 testing

04 learning from an expert

05 neurocognitive context dependent learning

06 Von-Restorff effect

07 case based learning through storytelling

08 competencies testing (retesting)

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.

20%

25%

4%

3%

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.

Certificate

The Postgraduate Certificate in Advanced Facial Rigging guarantees, in addition to the most rigorous and up-to-date training, access to a Certificate issued by TECH Global University.

Successfully complete this training program and receive your university certificate without travel or laborious paperwork"

This program will allow you to obtain your **Postgraduate Certificate in Advanced Facial Rigging** 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 Advanced Facial Rigging**

Modality: **online**

Duration: **6 weeks**

Accreditation: **6 ECTS**

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tech global university

Mr./Ms. _____, with identification document _____
has successfully passed and obtained the title of:

Postgraduate Certificate in Advanced Facial Rigging

This is a program of 180 hours of duration equivalent to 6 ECTS, with a start date of dd/mm/yyyy and an end date of dd/mm/yyyy.

TECH Global University is a university officially recognized by the Government of Andorra on the 31st of January of 2024, which belongs to the European Higher Education Area (EHEA).

In Andorra la Vella, on the 28th of February of 2024

Dr. Pedro Navarro Illana
Rector

Unique TECH Code: AFWORD23S   techtitute.com/certificates

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*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.

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