Postgraduate Diploma
Body Rigging

tech global university

Postgraduate Diploma
Body Rigging

- » Modality: **online**
- » Duration: **6 months**
- » Certificate: **TECH Global University**
- » Credits: **18 ECTS**
- » Schedule: **at your own pace**
- » Exams: **online**

Website: **www.techtitute.com/us/videogames/postgraduate-diploma/postgraduate-diploma-body-rigging**

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01
Introduction

Video game users value two factors above the rest: gameplay and graphics. Developing a character with realistic movements is not easy, and generating believable facial and body expressions is one of the biggest challenges in the video game industry. Titles such as GTA or The Last of Us have gone very deep into this section, with very good results. But, even so, the ceiling for this technique is a long way off. In this sense, TECH offers a complete and up-to-date program to create Riggers with the ability to develop hyper-realistic characters. In addition, the student will have the syllabus available in a wide variety of formats, the student will have the syllabus available in a wide variety of formats, being able to choose the one that best suits their preferences.

This Postgraduate Diploma program delves into the most specific aspects of Rigging so that the qualification holder can become a benchmark in the field"

Film is the other industry that currently demands more Riggers, and in this case, perfection of the final result is a must. The field of Video Games allows and requires more limited quality standards that meet the requirements of the engines In films, however, it is often required that the real character be indistinguishable from the fictional one. A specialization that matches the depth and detail of the program of this Postgraduate Diploma.

The syllabus covers essential concepts of Rigging, the role of Rigger and the search for employment in the sector. It will provide an insight and a deep breakdown of the phases of the rigging process, as well as the parts of a rig, its tools and the of the phases of the Rigging process that come into play. In addition to learning how to use the Autodesk Maya tool.

We will also study the model and the approach of a mechanical system for the character, adjusted to the specifications of the production. The intention is to develop a skeleton that articulates and deforms its geometry properly. Once these first phases have been defined, the process of creating body deformation rigging will be covered.

The last module of this Postgraduate Diploma will review NURBS objects, their edition and Constrain tools. Therefore, as well as the configuration and creation of other elements that will make the controls work properly. In general terms, the professional will learn how to design control elements and connect them to the deformation rig.

In addition, the content of this qualification is offered in a 100% online way and without timetables. All topics are available from the very first moment so that the student can work according to his or her own time. In this way, it ensures a suitable conciliation with the personal and work environment.

This **Postgraduate Diploma in Body Rigging** 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 Body 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
- Content that is accessible from any fixed or portable device with an Internet connection

In this program you will learn how to design realistic mechanical systems to give your projects the professionalism they require"

"

Familiarize yourself with the application of constraints in the Constrain tools section of the program"

In this qualification you will learn to work with NURBS type curve elements that generate controls for the Rig.

TECH provides you with the necessary keys to work with Autodesk Maya in an optimal way.

The program includes, in its teaching staff, professionals from the sector who bring to this program the experience of their work, in addition to recognized specialists from prestigious reference societies and 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.

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.

02
Objectives

Upon completion of this program, the student will have obtained all the keys to become a Rigging professional. You will master Autodesk Maya, you will know how to set up a correct bone system, control all the necessary tools for Skinning, create and edit NURBS type curve elements and understand Skinning work, you will be able to create and edit NURBS type curve elements and you will understand the possibilities of Constrain. Introduce the Python programming language for tool La creation in Autodesk Maya in Autodesk Maya.

With our program, you will learn how to create an adequate bone system that will give your project a solid foundation"

General Objectives

- Internalize the main notions of Rigging
- Learn how to use Autodesk Maya
- Understand the relationship between body deformation rigging and the bone system
- Familiarization with body control Rigging
- Introduction to the Python programming language

The TECH program explains in detail the best ways to use curves to create different types of NURBS objects"
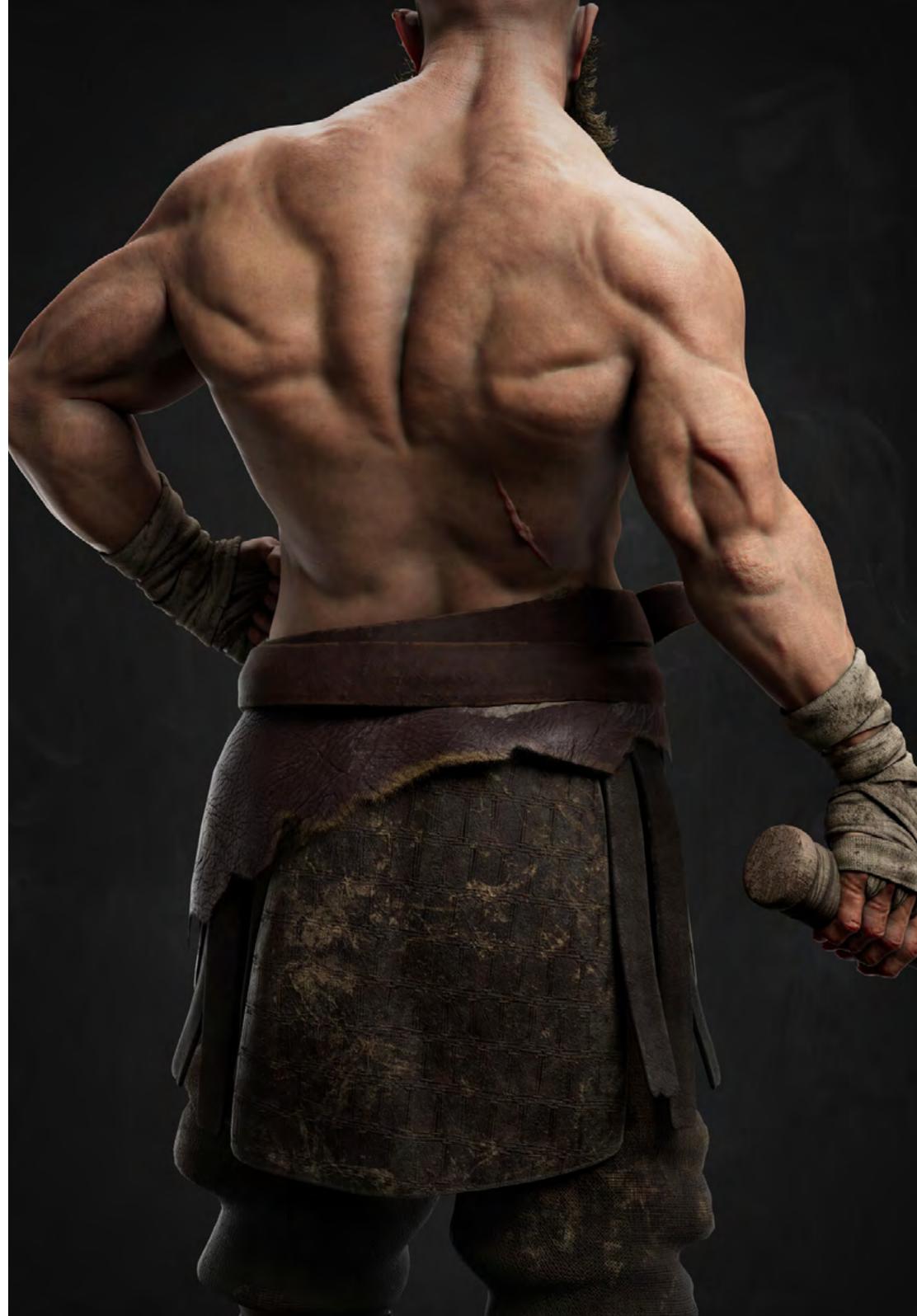
Specific Objectives

Module 1. Rigging

- Conceive the role of the Rigger
- Understand in a specialized way the production chain
- Know the differences between film and video game production
- Identify the production phases of a rigging process
- Identify the fundamental parts of a rig
- Master the Autodesk Maya software as a rigging tool
- To know in a professional way the different types of systems and elements that can compose a character Rig
- Master the job search system in the industry

Module 2. Body Deformation Rigging

- To know in a specialized way the deformation rigging and its relevance
- To set up the bone system by studying the pose of the model
- Conceive the possible errors that can occur in deformation Rigging
- To create in a professional way a bone chain by means of Joints type elements
- Know how to correctly orient and place bones in the deformation system
- To perform in a professional way a correct methodology in the painting process to understand the influences on the geometry
- Conceive how all the tools available in Autodesk Maya work for Skinning for Skinning work

Module 3. Body Control Rigging and Tool Creation with Python

- Highly knowledgeable about the functions that a control rig has and its relevance
- Master the standard nomenclature of the elements in the industry
- Create and edit NURBS type curve elements for the creation of controls for the Rig
- Analyze the character to propose a suitable control Rig
- Configure the controls properly to facilitate the animation phase
- Conceive Constrain tools and their possibilities
- Introduce the Python programming language for the creation of tools in Autodesk Maya
- Develop custom Scripts for Rigging work

03
Course Management

The management of this Postgraduate Diploma has selected an extensive and specific syllabus in order to make the learning process as optimal as possible Including all the features, processes and tools necessary to turn the professional into a Rigger. In addition, thanks to the wide experience of the teaching staff in the professional field, advice applicable to the reality of the sector will be provided and the most practical doubts will be solved.

ntrollers   Skin Binding

Create Joints

Orient Joints
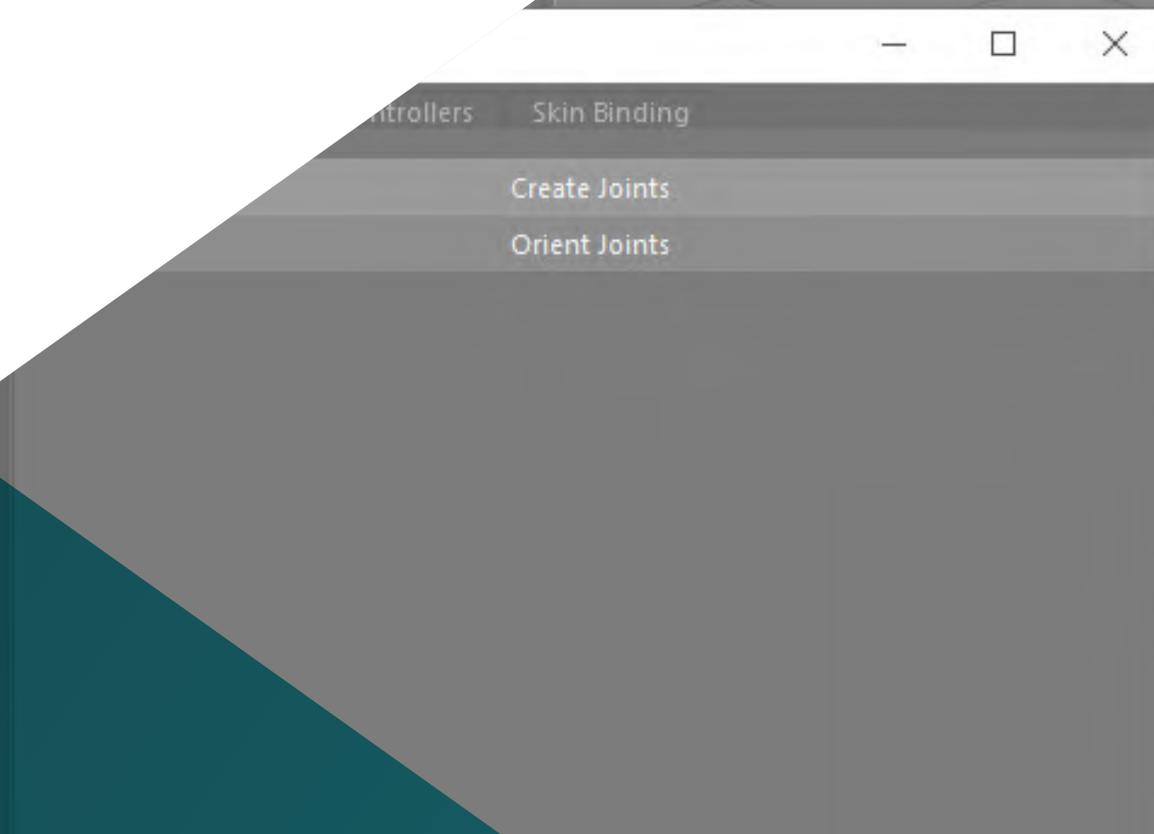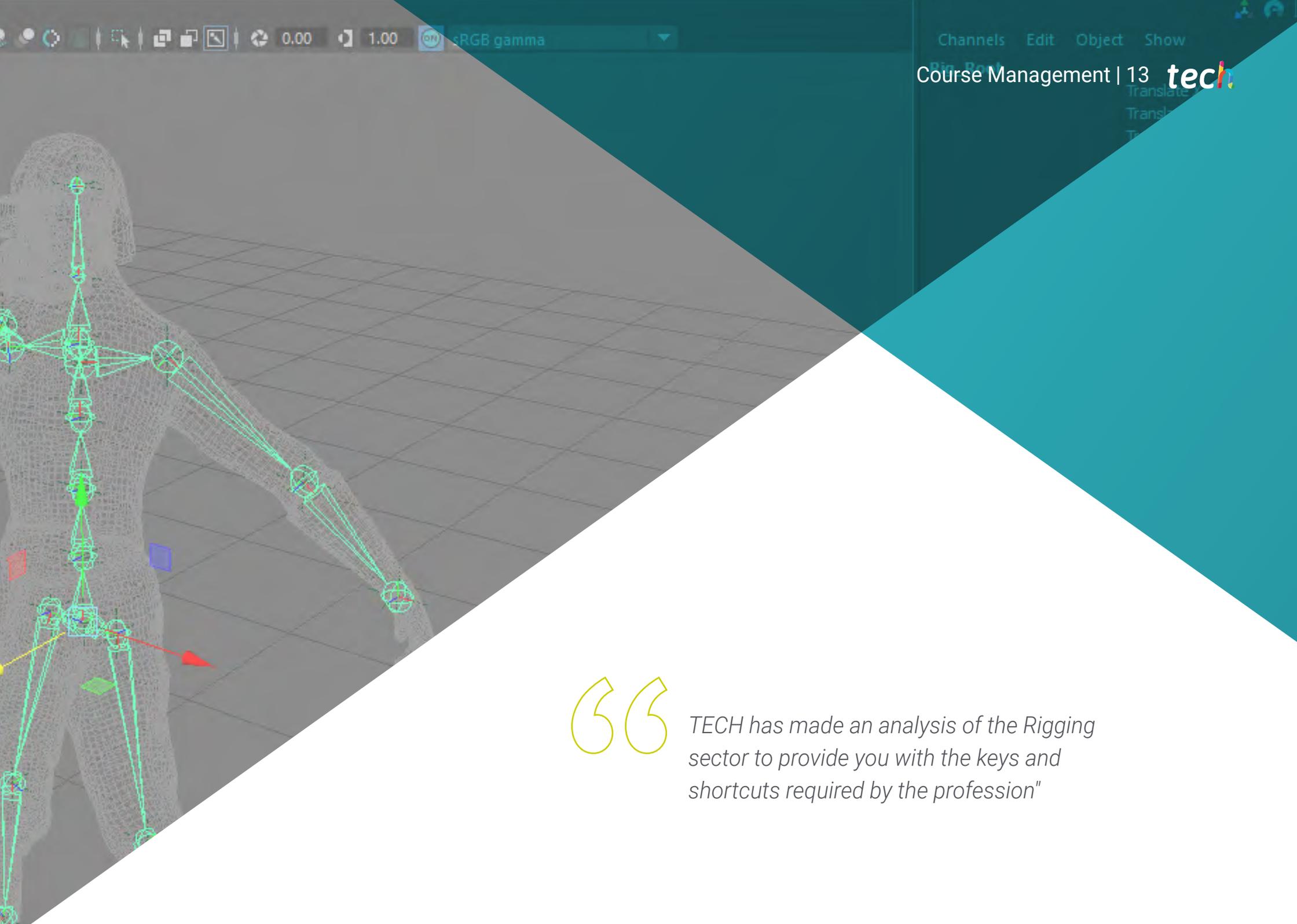
TECH has made an analysis of the Rigging sector to provide you with the keys and shortcuts required by the profession"

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 **2**024 **Ubisoft Developers Conference**, a testament to her leadership in the industry. She has also played a crucial role at **Stellar Creative La**b, 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

- Rigger and animator Video Games videogame Vestigion Lovem Games
- Master's Degree in Art and Production in Animation by the University of South Wales
- Master's Degree in 3D Character Modeling at ANIMUM
- Master's Degree in 3D Character Animation for Film and Video Games by ANIMUM
- Degree in Multimedia and Graphic Design at the University School of Design and Technology (ESNE)

04
Structure and Content

This Postgraduate Diploma reviews the basics of Rigging, then develops Body Deformation Rigging, Body Control Rigging and the creation of Python tools. TECH offers the possibility to learn everything related to Joints, Skinning, and body movement: lower body, upper body, extremities, etc. In addition, students will learn how to create their own tools to develop control systems more quickly, thanks to Script Editor and the Python programming language accompanied by the Maya command library.

Shorten the time of your project by combining the Script Editor tool, the Python programming language and the Autodesk Maya command library"

Module 1. Rigging

1.1. The Role of the Rigger
    1.1.1. Riggers
    1.1.2. Production
    1.1.3. Interdepartmental Communication

1.2. Rigging Phases
    1.2.1. Deformation Rigging
    1.2.2. Control Rigging
    1.2.3. Changes and Bug Fixes

1.3. Parts of an Rig
    1.3.1. Corporate Rigging
    1.3.2. Facial Rigging
    1.3.3. Automatic

1.4. Differences between Rig for Film and Video Games
    1.4.1. Rigging for Animated Films
    1.4.2. Rigging for Video Games
    1.4.3. Simultaneous Use of Other Software

1.5. 3D Model Study
    1.5.1. Topology
    1.5.2. Poses
    1.5.3. Elements, Hair and Clothing

1.6. Software
    1.6.1. Autodesk Maya
    1.6.2. Maya Installation
    1.6.3. Required Maya Plugins

1.7. Maya Rigging Basics
    1.7.1. Interface
    1.7.2. Navigation
    1.7.3. Rigging panels

1.8. Main Elements of Rigging
    1.8.1. Joints (Bones)
    1.8.2. Curves (Controls)
    1.8.3. Constrains

1.9. Other Rigging Elements
    1.9.1. Clusters
    1.9.2. Non-Linear deformers
    1.9.3. Mixing Shapes

1.10. Specialization
    1.10.1. Rigger Specialization
    1.10.2. The Reel
    1.10.3. Portfolio and Employment Platforms

Module 2. Body Deformation Rigging

2.1. Systems and Models
    2.1.1. Revision of the Model
    2.1.2. System Vulnerabilities
    2.1.3. Joints Nomenclatures

2.2. Joints Chain Creation
    2.2.1. Joints Editing Tools
    2.2.2. Factors to Consider
    2.2.3. Location and Hierarchy of Joints

2.3. Joints Orientation
    2.3.1. The Importance of a Correct Orientation
    2.3.2. Joints Orientation Tools
    2.3.3. Symmetry of Joints

2.4. Skinning
    2.4.1. Skeleton to Geometry Linking
    2.4.2. Influence Painting Tools
    2.4.3. Symmetry of Influences in the Model

2.5. Painting of Absolute Influences
    2.5.1. Influence Painting Process Approach
    2.5.2. Influences on Body Parts between Two Joints
    2.5.3. Influences on Body Parts between Three or More Joints

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"*

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 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.

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.

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 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 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%
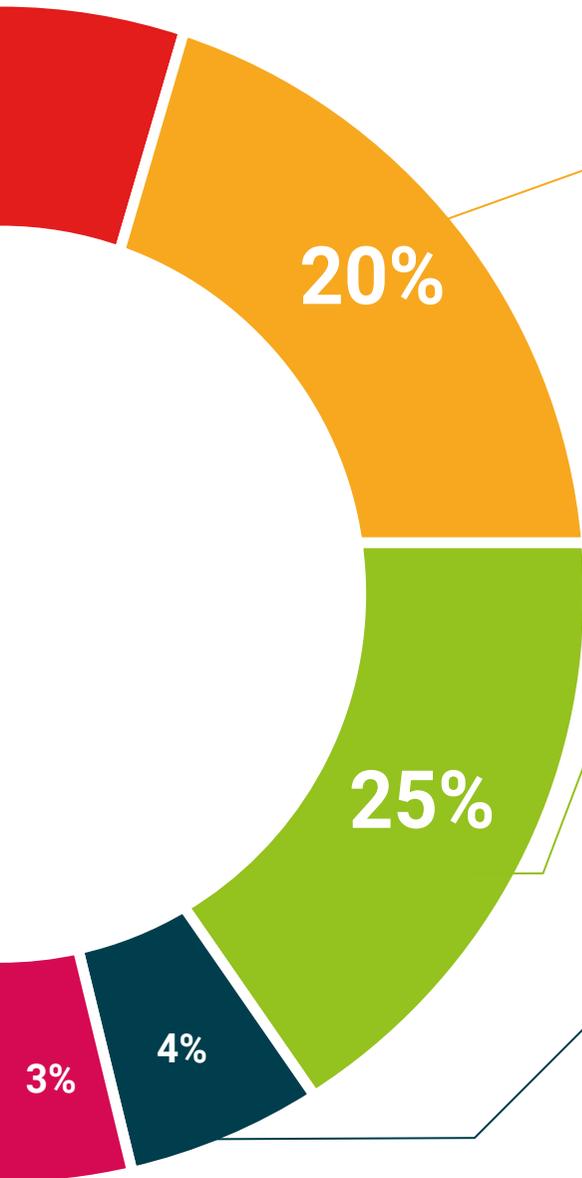
Case Studies

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.

Certificate

The Postgraduate Diploma in Body Rigging guarantees students, in addition to the most rigorous and up-to-date education, access to a Postgraduate Diploma issued by TECH Global University.

" *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 Diploma in Body 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 Diploma in Body Rigging**

Modality: **online**

Duration: **6 months**

Accreditation: **18 ECTS**

tech global university

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

Postgraduate Diploma in Body Rigging

This is a program of 450 hours of duration equivalent to 18 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

*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.

Postgraduate Diploma
Body Rigging

- » Modality: **online**
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